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Risk Adjustment in Public Programs

A Progress Report to the Legislature

January, 1996

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Minnesota Department of Health
Health Economics Program

Minnesota Department of Human Services

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Risk Adjustment in Public Programs

A Progress Report to the Legislature

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Risk Adjustment in Public Programs

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Risk Adjustment in Public Programs:
A Progress Report to The Legislature

Executive Summary

Minnesota statutes Chapter 62Q.03 Subdivision 5a requires that "the commissioners of health and human services shall report to the health care commission and to the appropriate legislative committees on January 15, 1996 and January 15, 1997, on any policy or legislative changes necessary to implement the public program risk adjustment system." This report is written in response to that requirement. Chapter 62Q.03 gives responsibility for the development of a public programs risk adjustment system for Medical Assistance, General Assistance Medical Care, and MinnesotaCare to the Departments of Health and Human Services. The Departments have concluded that there are no legislative changes necessary at this time to continue development of the risk adjustment system for public programs. This report represents a status report on public program risk adjustment activities and outlines future tasks.

Purpose of Risk Adjustment

Risk adjustment is a financial mechanism through which monetary transfers are made from health plans that insure lower risk populations to those that insure higher risk populations. Risk in this context refers to the risk of above average health care costs. Risk adjustment is designed to be a market tool, to allow health plans to compete fairly, on the basis of cost and quality rather than on the ability of the plan to enroll only healthier members.

Risk adjustment is necessary in Minnesota's state-run public programs, particularly as prepaid, managed care arrangements become more widespread and include populations such as the disabled. Under Minnesota's capitation programs, individuals can choose a health plan[1] from among a group of competing health plans. Individuals with extensive health needs often choose different plans from those with fewer health needs. In addition, health plans can influence who chooses them through marketing, network design, and other subtle means. In the end, it is very likely that some health plans will end up with a population that has higher cost health care needs than other plans. Capitation rates currently compensate plans for some of the differences in the patient population by adjusting for geographic area, age, gender, eligibility category and institutional status. However, these adjustments do not fully adjust for differences that exist between plans' populations. For example, no adjustments are made for the health status of the plans' populations or for what health conditions they may have. As Minnesota expands its managed care for state-run public programs, risk adjustment will be critical to assure that health plans compete fairly, incentives to discourage high risk and special needs populations are reduced, and incentives to care for and manage these populations are increased. Risk adjustment

[1] The term "health plan" is used here broadly, to include all health care service delivery networks.

will assist in promoting the development of networks that specialize in caring for populations with complex, costly health care needs.

Work Progress to Date

Development of the public programs risk adjustment system began with extensive analysis of existing risk adjustment methods and systems. We have worked with the private sector Risk Adjustment Association's Methods Committee in identifying methods and considering their strengths and weaknesses for use in the public and private sectors in Minnesota, and have developed an extensive set of materials and knowledge concerning existing systems. Through our Robert Wood Johnson Foundation (RWJF) grant, we have contracted with the Park Nicollet Medical Foundation and the University of Minnesota to provide expert assistance. We have convened an 18-member Public Programs Risk Adjustment Work Group (PPRAWG), representing plans, providers, consumers and the state. We have coordinated the activities of risk adjustment with DHS activities such as rate setting, Prepaid Medical Assistance Program (PMAP) expansion, and the disabled pilot program development.

Methods

The 1995 MinnesotaCare law requires that the public program risk adjustment system focus on demographics, health conditions, and other factors related to poverty, cultural or language barriers, or other special needs of public program populations. We will evaluate two types of diagnosis-based models: a targeted conditions model, where a finite set of conditions (usually inpatient-based) are chosen for added payments, and 2) a population-based diagnosis classification system which evaluates all recipients (using ICD-9 codes) to determine risk. We will also explore the possibility of combining these two approaches. Research done elsewhere indicates that population-based diagnosis models are superior in predicting future health needs, and provide less opportunity for gaming. Working with the PPRAWG, we have identified a number of potential factors related to the special needs of the public programs population. These factors will be evaluated for possible addition to the risk adjustment model. Many of these factors can be derived from existing eligibility data.

Future Work Plan

Over the next year, we will continue to develop a risk adjustment system for public programs. The Departments are in the process of developing a database for evaluation of different risk adjustment models. This database will include claims and eligibility data on MA, GAMC, and MinnesotaCare. A health status survey of recipients, funded through MDH's RWJF grant, will be administered, to explore factors not available through eligibility data, and to validate claims and encounter data.

Recommendations

1. Development of the public programs risk adjustment system should proceed as directed by existing legislation. Implementation should be targeted for 1/1/98, as is currently required.

2. Implementation of risk adjustment should be authorized to begin earlier than 1998 on a more limited basis, particularly for counties implementing managed care for the disabled.

3. Methods which will be tested for implementation in public programs include a demographic component, a targeted conditions component, a population-based system such as ACGs, and a combination of these approaches.

4. Risk adjustment can be built around existing data sources. If encounter data are available from health plans, a more accurate and complete risk adjustment model can be implemented. If such data are not available, a less effective risk adjustment system, which would require separate aggregate data submissions on the part of participating plans, would need to be implemented.

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Risk Adjustment in Public Programs

A Progress Report to the Legislature

Purpose of Risk Adjustment

What is Risk Adjustment?

Risk Adjustment is a financial mechanism through which monetary transfers are made from health plan companies that insure lower risk populations to those that insure higher risk populations. *Risk-in this context- refers to the risk of above average health care costs.* Risk adjustment is needed where health plans receive similar capitated payments (or premiums) per individual, and where there is reason to believe that plan *populations* may differ in terms of their risk of health care costs. Population risk differences across plans are likely to arise when individuals have a choice among different health plans, and where health plans have different structures, provider networks, benefits, etc.

Without risk adjustment, health plans have an incentive to avoid above average risks, since they will lose money on such enrollees. Even where health plans are prohibited from refusing coverage to high risk individuals, health plans can engage in subtle methods of avoidance, such as restricting provider networks, marketing differently, and other strategies. Without risk adjustment, plans which don't engage in such behaviors and which attract higher than average risks will experience financial hardships related to the risk of the population they attract. Risk adjustment is a market tool, which facilitates competition on the basis of cost and quality. *Risk adjustment reduces the incentives to "cherry-pick," reduces the financial hardships faced by plans which attract a higher risk population, and increases the incentives to innovate in treating these populations. Risk adjustment, if done properly, can provide an incentive for plans to develop networks which excel at providing health care to individuals with special needs.*

It is important to note that risk adjustment will not protect health plans from the financial effects of high health care costs related to other things. For example, if a health plans enrolls an average risk population and manages the care of that population poorly, the plan will not receive a risk adjustment payment. Risk adjustment results in transfers based on the *characteristics of the patient population* enrolled and what patients with those characteristics *should* cost to treat.[2] The formula for calculating the amount of transfer (in or out) for a particular health plan is determined in advance. Depending on the risk adjustment system put in place, this formula might be a specified dollar amount for each enrollee with a particular condition, or a formula that compares each plan's average risk across all risk factors to the average risk across all risk factors for all plans combined, and converts that to a dollar value that reflects the difference in expected health care costs. The amount of the transfer is therefore determined on the basis of the characteristics of the plan's enrollees (i.e., how many patients they enrolled with a specific condition, how their average age, gender, other risk factors compares to other plans' average). It is *not based on the health plans actual costs being above average.* Therefore, all plans have an incentive to be efficient, and have less incentive to "cherry-pick" low risk enrollees.

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[2]Actual transfer amounts may be based on the average cost for that type of patient, or on the average costs of the most efficient health plan for treating that type of patient.

Also, risk adjustment must be coordinated with the capitation rate-setting (or premium-setting) mechanism. For example, if capitation rates are adjusted for all expected differences in risk of the population, risk adjustment would not be necessary. Health plans enrolling a risky population would get higher capitation payments up front. If capitation rates are adjusted for a subset of differences (age and gender, for example) then it would not be necessary to include those factors in the risk adjustment process. Risk adjustment would then focus on other characteristics of the enrolled populations which are related to cost differences.

Why is Risk Adjustment Needed in Minnesota's Public Programs?

Risk adjustment is important for state-run public programs, particularly as prepaid, managed care arrangements become more widespread and involve a more diverse population. Under current Medicaid capitated arrangements, patients choose from among a group of competing health plans. Each health plan receives a rate per enrollee which is determined based on a rate cell system which adjusts rates for age, gender, geographic location, eligibility category, and institutional status. While these rates attempt to compensate health plans up front for *some* of the differences in patient populations, there are other differences for which rates are not adjusted. For example, the health status of populations, and the medical conditions they have are not typically adjusted for in rate setting systems.

Under Minnesota's Prepaid Medical Assistance Program (PMAP), patients are free to choose among the participating plans. With this type of free choice, health plans may attract different risk mixes. High risk individuals, or those that expect to use a lot of health care services, may choose one type of health plan, while low risk individuals may choose another. In fact, in 1982 when Minnesota attempted to enroll the disabled population in the managed care system, the majority of disabled clients chose one particular plan. This unequal distribution of risks, if not addressed, would leave some plans at a significant disadvantage.

Expansion of managed care

Currently, PMAP is operating in 16 counties in Minnesota: Dakota, Hennepin, Ramsey, Anoka, Washington, Carver, Scott, Itasca, Stearns, Benton, Sherberne, St. Louis, Carleton, Lake, Cook, and Koochiching.[3] Within these counties, enrollment in PMAP is mandatory for nearly all public recipients. Several groups are excluded, including the blind and disabled under 65 years, and several other groups[4]. The Department of Human Services (DHS) is planning a major expansion of capitated arrangements in the near future, including expansion of capitation arrangements statewide. The disabled population will be enrolled in a prepaid managed care system on a pilot project basis beginning in mid-1997. The actual design of the pilot project is not yet developed, however there is a commitment to moving all disability groups and all covered services into a managed care program.

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[3] Sterns, Benton, Sherberne, St. Louis, Carleton, Lake, Cook, and Kootchiching counties began PMAP enrollment in January, 1996.

[4] "Overview of the Minnesota Prepaid Medicaid Demonstration Project", Department of Human Services, 1995.

Under the prepaid manage care program, the state is committed to providing public program recipients with a choice among several health plans[5]. That, coupled with the inclusion of the disabled population in manage care programs, indicates the need for an effective risk adjustment system in both the general PMAP program and the pilot program for the disabled. As DHS moves to expand managed care, and toward a more competitive bidding process, risk adjustment is one tool which can encourage fair competition and provide incentives to develop innovative networks capable of serving the complex needs of high risk, high cost individuals.

History of Risk Adjustment Activities in Minnesota

Discussions concerning risk adjustment began in Minnesota in 1993, with the passage of the MinnesotaCare Act. Informal groups representing health plans, consumers, providers, and state agencies held several meetings to discuss the need for a risk adjustment mechanism in the context of health reform. Specifically, Minnesota's plan to move toward community rating and guaranteed issue, in conjunction with universal coverage, would provide an acute need to risk adjust in at least some parts of the private insurance market. As a result of these meetings, the 1994 MinnesotaCare law created a Risk Adjustment Expert Advisory Panel and a Risk Adjustment Association. The Panel was to assist the Departments of Health and Commerce in drafting a report to the legislature, due January 1995, concerning how risk adjustment should be implemented. The Association was to participate on the Expert Panel, and then implement risk adjustment in the private sector.

The January 1995 Report to the Legislature

The Commissioners submitted a report to the legislature in January of 1995, outlining recommendations for risk adjustment based on discussions with the Expert Panel.[6] The 1995 report recommended that risk adjustment be developed for the private sector (i.e., the individual, small group, and Medicare Supplement markets) by the Risk Adjustment Association, with oversight by the Departments of Health and Commerce. It was recommended that the date of implementation in the private sector (previously set at July 1997) be removed, as it appeared that movement to community rating and guaranteed issue would not take place, making risk adjustment less critical for the private sector markets.

The report also recommended development of risk adjustment for the public sector by the Departments of Health and Human Services. The public risk adjustment system was to be separate from, but coordinated with, the private sector initiative. Funding for the private sector risk adjustment system would be the responsibility of the private sector, and funding for the public sector system would be the responsibility of the state.

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[5] The term "health plan" is used here broadly, to include all health care service delivery networks.

[6] "Risk Adjustment: Report from the Commissioner of Health and the Commissioner of Commerce to the Legislature," January 1995. MDH.HCDP3.005

1995 Legislative requirements

The Commissioners report was accepted in large part by the legislature, and the report's recommendations were incorporated into the 1995 MinnesotaCare law (See Attachment A). This law requires that risk adjustment systems for the state run public programs be developed and implemented by January 1998. The legislation places primary responsibility for public program risk adjustment with the state, specifically with the Departments of Health and Human Services. The state is also responsible for coordinating the public programs risk adjustment system with private-sector risk adjustment work and the rate setting process for public programs. The state was required to convene a technical work group, the Public Program Risk Adjustment Work Group (PPRAWG), to assist the state in developing the public program risk adjustment system. The legislation further required that the risk adjustment system incorporate factors related to poverty and other special needs of the public program population.

Funding for public sector risk adjustment activities has been a combination of state and grant funding. State funding, through the Health Care Access Fund has been limited to one research position. Additional support for the activities of the PPRAWG, for costs related to copying meeting materials, mailings, etc., has been absorbed within the budget of the Department of Health. The cost of producing this report has also been absorbed by the Department of Health.

The majority of costs associated with the risk adjustment project has been funded through a grant from the Robert Wood Johnson Foundation's Initiatives in State Health Reform. In Phase I of the RWJF grant, which ran from September 1, 1992 to November 30, 1995, the state received approximately $ 98,000 to fund risk adjustment activities. This supported one staff person, travel to bring in experts on risk adjustment, some supplies, computer programming consultation, and a contract with Park Nicollet and the University of Minnesota for technical assistance. (More details about the work completed under this contract is found in the next section). Phase II of the grant, which began on December 1, 1995 and runs through November 30, 1998 provides $185,400 for risk adjustment activities. This will fund a follow-on contract for technical assistance, the conduct of a health status survey of public recipients, and travel and consulting expenses to bring in additional experts on risk adjustment methods.

Private Sector Activities

The Risk Adjustment Association (RAA) was required by the 1995 MinnesotaCare legislation to continue development of risk adjustment for the private sector markets, and to develop an implementation plan for risk adjustment in the private sector. This implementation plan was due to the Commissioners of Health and Commerce by November 5, 1995. In this plan, which is currently being reviewed by the Commissioners, the RAA is recommending that risk adjustment not be implemented in the private sector until the benefits outweigh the costs. They conclude that this is not the case presently, in the absence of community rating and guaranteed issue. They are recommending that development activities continue, so that the system would be ready for implementation more quickly should the costs and benefits change.

Work Progress to Date

The Process Used to Develop the Public Programs Risk Adjustment Mechanism

Since the passage of the 1995 MinnesotaCare law, progress has been steadily made toward developing and implementing risk adjustment in the state run public health care programs. The Minnesota Department of Health (MDH), together with the Minnesota Department of Human Services (DHS), have been given the responsibility to recommend a risk adjustment mechanism for prepaid, publicly funded health care programs including Medical Assistance (MA), General Assistance Medical Care (GAMC), and MinnesotaCare. Statewide implementation of PMAP is scheduled for 1998. In addition, a pilot program for MA disabled persons is scheduled to begin in 1997.

To this point the design and development of the public programs risk adjustment mechanism has involved considerable coordination with the private sector risk adjustment initiative through (1) collaboration with the Methods Committee[7] of the Risk Adjustment Association in the form of the identification and thorough review and examination of alternative risk adjustment mechanisms; (2) the participation of the Park Nicollet and University of Minnesota consultants in both the private and public sector risk adjustment initiatives, and (3) the development of scientific literature and other resources related to the emerging risk adjustment technology which was produced through these collaborations. As the public programs risk adjustment development process moves forward, however, it has become clear that constraints that may affect the range of plausible risk assessment models in the private sector may not be the same in the public sector. The uniqueness of public program populations may require that the public program risk adjustment system be somewhat distinct from the private sector risk adjustment system.

The PPRAWG was authorized by the legislature in 1995 to advise the Departments of Health and Human Services regarding the design and development of the risk adjustment mechanism for the state administered public health care programs. The PPRAWG is comprised of 18 members who were appointed in September, 1995. As specified by the 1995 MinnesotaCare law, the work group is composed of representatives from a wide variety of potential stakeholders in the risk adjustment process. Specifically, ten members were appointed by provider organizations and county government agencies as follows: one by the Minnesota Medical Association, two from the Minnesota Hospital Association, five from the Minnesota Council of HMOs, and two county representatives appointed by the Association of Minnesota Counties. In addition, eight members were appointed by the Governor's Office as follows: six represent the interests of particular groups of persons served by the publicly paid health care programs (e.g., families,

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[7] The Risk Adjustment Association was authorized by the legislature to develop and implement the private sector risk adjustment mechanism for the individual, small group, and Medicare supplement markets. The Methods Committee of the Association met approximately monthly from June through October, 1995 to evaluate the available alternative risk adjustment mechanisms, and develop a recommendation regarding the selection from among those mechanisms for implementation in the private sector. MDH staff involved in the development of the public programs risk adjustment mechanism also participated in these activities.

children, elderly, persons with mental health, developmental or physical disabilities); and two representing local community health boards (See Attachment B for the PPRAWG Membership List).

Further, through a grant from the Robert Wood Johnson Foundation (RWJF) under its State Initiatives in Health Reform Program, the Departments were able to obtain the technical assistance of experts on risk assessment and adjustment from Park Nicollet Medical Foundation and the Institute for Health Services Research at the University of Minnesota. More specifically, the charge of these consultants was to: (1) make recommendations regarding the design, development, implementation, evaluation, and ongoing improvement of the public programs risk adjustment mechanism; (2) assist in the development and analysis of the administrative claims/encounter data sets necessary for developing and implementing public programs risk adjustment; and; (3) draft a population survey instrument to identify additional risk factors for possible inclusion in risk adjustment not available from administrative data sources. Representatives from the Departments of Health and Human Services met with the Park Nicollet and University of Minnesota consultants regularly from early July through mid December, 1995 to develop the plan and a report reflecting their recommendations regarding the plan. In addition, the consultants assisted in the initial orientation of the PPRAWG to public programs risk adjustment. (See Attachment C for the final report from this contract).

The PPRAWG has formally met three times since its formation (October 31, 1995, December 11, 1995, and January 8, 1996) to discuss its charge and begin its work (Attachment D contains minutes from these meetings). As a result of those meetings, the work group has provided invaluable contributions to the development of the public programs risk adjustment process, particularly in the form of identifying a broad array of potential risk factors that may be unique to the populations served by the public programs. These discussions took the form of brainstorming sessions for the purpose of developing a comprehensive list of factors that could predict health care expenditures in the public programs populations (A draft of this list is included in Attachment E). This list was initially developed intentionally without regard to the feasibility of their measurement. Once the list is considered complete, the staffs of the Departments plan to work with the work group and others in identifying potential data sources and/or possibilities for the measurement of the risk factors identified through this process. Those that can be measured will be studied to see if in fact they are actually predictive of health care costs. In addition, the PPRAWG has discussed the rationale and methods of risk adjustment.

Discussions with the PPRAWG have highlighted the fact that some factors which turn out to be predictive of costs may in fact not be viable candidates for inclusion in a risk adjustment system, because they cause counter-productive incentives. For example, some populations have experienced significant barriers to getting the care they need. Inclusion of a marker for that population in the risk adjustment system may be predictive of lower costs, while the actual need for care of the population may be average or above average. In this case, the state may prefer to incent health plans to provide more, not less, care to that population and would therefore not want to include that population marker in the risk adjustment system. The PPRAWG and staff will review proposed factors prior to the final determination of whether or not they should be included in the risk adjustment system, to identify any that might fall into this category.

Finally, the staffs of the Departments of Health and Human Services have been working together to ensure that the development of the public programs risk adjustment mechanism is coordinated with the changes in the "prospective rate setting methodology" in the Prepaid Medical Assistance Program PMAP), as required by 1995 legislation,[8] and with DHS's plan to move to competitive bids. This legislation requires the Commissioner of Human Services and the Rate Setting Task Force to develop a prospective rate setting methodology by January 1, 1998, and that it must incorporate the public programs risk adjustment mechanism. To accomplish this, relevant staff from MDH participate in the meetings of the DHS Rate Setting Task Force, and relevant staff from DHS participate in MDH meetings with the PPRAWG and the Park Nicollet and University of Minnesota consultants to ensure the integration of the prospective rate setting and risk adjustment initiatives.

The movement to a "competitive bidding" process of determining capitation rates makes risk adjustment critical, to ensure that health plans do not have an even greater incentive to attract low-risk enrollees (and discourage high risk enrollees) in order to be able to lower their bid. Under a competitive bidding model, risk adjustment will level the playing field, so that plans bid based on their efficiencies and quality, rather than on their risk pool, and so that plans have an incentive to construct a network capable of providing service to the full spectrum of public program recipients.

Methods

Risk adjustment in prepaid, public health care programs would operate in a health care market in which recipients would choose to receive their health from among two or more competing health plans. DHS would essentially redistribute funds among the competing health plans based on those differential risks that have not been accounted for in the capitation payments each plan received. More specifically, DHS would (1) assess the aggregate relative risk of the population covered by each competing health plan, and (2) adjust capitation payments to health plans or make risk-based financial transfers separately based on the assessed differences in risk of each plan's recipient population. Plans for which aggregate relative risk was above average would receive payments or capitation increases, whereas those for which their aggregate risk was below average would make payments or receive capitation reductions.

The relative risk of health plan recipient populations will be assessed using a risk assessment model that incorporates some combination of demographic, eligibility, and diagnosis data. The specific model will need to be determined on the basis of an analysis of the relative merits of alternative models (e.g., in terms of predictive power, feasibility). MDH and DHS will evaluate these models using Minnesota public programs data. Social and cultural factors identified from the population survey as significant risk factors may be added to the eligibility application process if appropriate.

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[8] Minnesota Laws of 1995, Chapter 207 (S.F. 1110, 1995 Legislative Session, Article 6, Section 118.

Recipient demographic and eligibility characteristics (e.g., age, gender, public program) have historically been used in the PMAP rate setting process. These and other demographic factors should be evaluated for possible inclusion in the risk assessment model to the extent they are not included in the rate setting process. However, research has shown that risk assessment models based on diagnostic information are much better able to predict expenditures than models restricted to demographic and eligibility characteristics.[9] As a result, there are two alternative yet potentially complementary classes of diagnosis-based risk assessment models that we will evaluate: (1) a targeted conditions model, and (2) population-based diagnosis classification systems.

Targeted conditions models essentially focus the assessment process on a small subset of specific clinical conditions, typically those treated in inpatient settings, that account for a small fraction of a given population and a relatively small proportion of expenditures.[10] Relative cost weights are developed and assigned to each condition, and differences across plans in the numbers of recipients for whom the targeted diagnoses were present in the claims or encounters would determine plans' relative risk. The principal advantage of a targeted conditions model is that risk assessment would require plans to simply submit the number of recipients with each of the targeted conditions each year. This is often easier than for conditions treated exclusively in ambulatory settings, since diagnosis data for conditions resulting in inpatient treatment are typically more accessible. Disadvantages of such a model is that it creates perverse incentives to increase the number of recipients with targeted conditions and reduces emphasis on ambulatory care. It also excludes many conditions which have above average costs, and it provides opportunities for gaming within categories (such as attracting healthier diabetics and discouraging sicker ones).

A risk assessment model based on a population-based diagnosis classification system, on the other hand, permits the assessment of the risk of the entire enrollee/recipient population: that is those for whom there was (1) no health care utilization, (2) only ambulatory utilization, or (3) both inpatient and ambulatory utilization during the year. The most promising of these types of systems are the Johns Hopkins Ambulatory Care Groups (ACGs),[11] the Diagnostic Cost Groups (DCGs)[12] and the Chronic Disease Categories which is being developed by the Medicaid

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[9] Park Nicollet Medical Foundation and Johns Hopkins University, "A Comparison of Alternative Approaches to Risk Measurement," A Report for the Physician Payment Review Commission. 11/30/94.

[10] Health Insurance Plan of California - Working Paper, Methods for Calculating and Applying Risk Assessment and Risk Adjustment Measures, Managed Risk Medical Insurance Board, January 20, 1995.

[11] Weiner, J.P., Starfield, B.H., Steinwachs, D.M., and Mumford, L.M., "Development and Application of a Population-Oriented Measure of Ambulatory Care Case-Mix," Medical Care, Vol. 29, No. 5, May, 1991.

[12] Ash A., Porell, F., Gruenberg, L., Sawitz, E. and Beiser, A. "Adjusting Medicare Capitation Payments Using Prior Hospitalization Data," Health Care Financing Review, Vol. 10, No. 4,

Working Group.[13] Since these systems require the use of diagnostic data from claims and encounters to classify recipients, plans would need to submit utilization data that includes diagnostic codes (i.e., ICD-9 codes), age and gender for the risk assessment process. Service and procedure codes would also be desirable, for the evaluation of the effectiveness of the risk adjustment process in terms of impacts on health plan emphasis on quality, effectiveness, and efficiency.

In meetings of the PPRAWG and DHS Rate Setting Task Force, health plans have repeatedly indicated that they can provide the claims or encounter data necessary for such a model. In addition, the data needed for this type of model is contained within the encounter data set being developed by HCFA as the Medicaid-Medicare Common Data Initiative, a data set likely to be required of all states implementing Medicaid managed care. We therefore expect that this model may be more feasible for public programs than for commercial risk adjustment.

In addition, we will evaluate the extent to which a risk adjustment mechanism based on a combination of a targeted conditions and a population-based diagnosis classification system for particular public program populations will be desirable. The rationale underlying this recommendation is based on the observation that while much of the work on risk adjustment has used data on populations enrolled in health plans for fixed and relatively long periods of continuous enrollment, significant sub-populations of the public programs population experience significant discontinuities in their program eligibility. This observation raises the question as to whether or not risk assessment models for the continuously eligible population are applicable to those with short, interrupted, or otherwise discontinuous eligibility histories. Based on recommendations from our consultants as well as ongoing national work to develop a risk adjustment system for Medicare, we believe that risk adjustment which combines targeted conditions and population-based systems may be a solution to this problem.

Once the relative risk of health plans is determined by the risk assessment mechanism, the next step is the actual risk adjustment process, where the relative risk is translated into payment adjustments. This process can be linked directly to the rate setting process, can be an adjunct to the rate setting process, or could be done separately from rate setting. It could be done at the beginning of the contract year, as a year-end adjustment, or some combination of both. These options raise significant implications for administration of the system. In addition, they raise financial implications for plans, and may involve different data reporting requirements. To this point, we have not arrived at any specific recommendations on the process to be used. Each of the possible processes will be evaluated more fully prior to implementation and we will ultimately recommend the process which meets the goal of administrative efficiency and overall effectiveness.

Summer, 1989: 17-29.

[13] Kronick, R., Zhiyuan, Z., and Dreyfus, T., "Making Risk Adjustment Work for Everyone," Inquiry, Vol. 32, Spring, 1995: 41-55.

Future Work Plan

Over the next 12 months, MDH and DHS will continue to work towards implementation of risk adjustment in the state-run public programs. The Departments are in the process at this time of assembling the data bases necessary to evaluate each of the models of risk assessment. We have obtained permission from the author of the ACG system to be granted free access to the ACG software for evaluation purposes. We anticipate coming to an agreement with the author of DCG software as well. We have also obtained the software for creating the Chronic Disease Categories for the disabled. A health status survey of public programs clients will be administered. The survey was developed under our RWJF grant, to assess additional factors possibly related to risk of health care costs and to validate the use of administrative (claims, enrollment, encounter) data sets for risk adjustment. We will explore the various options available for administration of the payment adjustment process, and its links to the rate setting process.

Recommendations

1. Development of the public programs risk adjustment system should proceed according to the current legislative direction. Implementation should be targeted for 1/1/98, as is currently required.

2. Implementation of risk adjustment should be authorized to begin earlier than 1998 on a more limited basis, particularly for counties implementing managed care for the disabled.

3. Methods which will be tested for implementation in public programs include a demographic component, a targeted conditions component, a population-based system such as ACGs, and a combination of these approaches.

4. Risk adjustment can be built around existing data sources. If encounter data are available from health plans, a risk adjustment model that is more comprehensive and accounts for more of the risk of health care costs can be implemented. If such data are not available, a less effective risk adjustment system would need to be implemented, but it would still require separate aggregate data submissions by participating plans.

Attachment A

Risk Adjustment Statute
1995 MinnesotaCare Law

ARTICLE 2

Sec. 8. Minnesota Statutes 1994, section 62Q.03, subdivision 1, is amended to read:

Subdivision 1. [PURPOSE.] ~~Risk adjustment is a vital element of the state's strategy for achieving a more equitable, efficient system of health care delivery and financing for all state residents.~~ The purpose of risk adjustment is to reduce the effects of risk selection on health insurance premiums by making monetary transfers from health plan companies that insure lower risk populations to health plan companies that insure higher risk populations. Risk adjustment is needed to: achieve a more equitable, efficient system of health care financing; remove current disincentives in the health care system to insure and ~~serve~~ provide adequate access for high risk and special needs populations; promote fair competition among health plan companies on the basis of their ability to efficiently and effectively provide services rather than on the ~~health~~ risk status of those in a given insurance pool; and help ~~assure~~ maintain the viability of ~~all~~ health plan companies, ~~including community integrated service networks~~ by protecting them from the financial effects of enrolling a disproportionate number of high risk individuals. It is the commitment of the state to develop and implement a risk adjustment system ~~by July 1, 1997, and to continue to improve and refine risk adjustment over time~~. ~~The process for designing and implementing risk adjustment shall be open, explicit, utilize resources and expertise from both the private and public sectors, and include at least the representation described in subdivision 4. The process shall take into account the formative nature of risk adjustment as an emerging science, and shall develop and implement risk adjustment to allow continual modifications, expansions, and refinements over time. The process shall have at least two stages, as described in subdivisions 2 and 3.~~ The risk adjustment system shall:

(1) possess a reasonable level of accuracy and administrative feasibility, be adaptable to changes as methods improve, incorporate safeguards against fraud and manipulation, and shall neither reward inefficiency nor penalize for verifiable improvements in health status;

(2) require participation by all health plan companies providing coverage in the individual, small group, and Medicare supplement markets;

(3) address unequal distribution of risk between health plan companies, but shall not address the financing of public programs or subsidies for low-income people; and

(4) be developed and implemented by the risk adjustment association with joint oversight by the commissioners of health and commerce.

Sec. 9. Minnesota Statutes 1994, section 62Q.03, is amended by adding a subdivision to read:

Subd. 5a. [PUBLIC PROGRAMS.] (a) A separate risk adjustment system must be developed for state-run public programs, including medical assistance, general assistance medical care, and MinnesotaCare. The system must be developed in accordance with the general risk adjustment methodologies described in this section, must include factors in addition to age and sex adjustment, and may include additional demographic factors, different targeted conditions, and/or different payment amounts for conditions. The risk adjustment system for public programs must attempt to reflect the special needs related to poverty, cultural, or language barriers and other needs of the public program population.

(b) The commissioners of health and human services shall jointly convene a public programs risk adjustment work group responsible for advising the commissioners in the design of the public programs risk adjustment system. The commissioner of health shall work with the risk adjustment association to ensure coordination between the risk adjustment systems for the public and private sectors. The commissioner of human services shall seek any needed federal approvals necessary for the inclusion of the medical assistance program in the public program risk adjustment system.

(c) The public programs risk adjustment work group must be representative of the persons served by publicly paid health programs and providers and health plans that meet their needs. To the greatest extent possible, the appointing authorities shall attempt to select representatives that have historically served a significant number of persons in publicly paid health programs or the uninsured. Membership of the work group shall be as follows:

(1) one provider member appointed by the Minnesota Medical Association;

(2) two provider members appointed by the Minnesota Hospital Association, at least one of whom must represent a major disproportionate share hospital;

(3) five members appointed by the Minnesota Council of HMOs, one of whom must represent an HMO with fewer than 50,000 enrollees located outside the metropolitan area and one of whom

must represent an HMO with at least 50 percent of total membership enrolled through a public program;

(4) two representatives of counties appointed by the Association of Minnesota Counties;

(5) three representatives of organizations representing the interests of families, children, childless adults, and elderly persons served by the various publicly paid health programs appointed by the governor;

(6) two representatives of persons with mental health, developmental or physical disabilities, chemical dependency, or chronic illness appointed by the governor; and

(7) three public members appointed by the governor, at least one of whom must represent a community health board. The risk adjustment association may appoint a representative, if a representative is not otherwise appointed by an appointing authority.

(d)The commissioners of health and human services, with the advice of the public programs risk adjustment work group, shall develop a work plan and time frame and shall coordinate their efforts with the private sector risk adjustment association's activities and other state initiatives related to public program managed care reimbursement. The commissioners of health and human services shall report to the health care commission and to the appropriate legislative committees on January 15, 1996, and on January 15, 1997, on any policy or legislative changes necessary to implement the public program risk adjustment system.

Sec. 10. Minnesota Statutes 1994, section 62Q.03, is amended by adding a subdivision to read:

Subd. 5b. [MEDICARE SUPPLEMENT MARKET.] A risk adjustment system may be developed for the Medicare supplement market. The Medicare supplement risk adjustment system may include a demographic component and may, but is not required to, include a condition-specific risk adjustment component.

Sec. 11. Minnesota Statutes 1994, section 62Q.03, subdivision 6, is amended to read:

Subd. 6. [CREATION OF RISK ADJUSTMENT ASSOCIATION.] The Minnesota risk adjustment association is created on July 1, 1994, and may operate as a nonprofit unincorporated association~~.~~, but is authorized to incorporate under chapter 317A.

The provisions of this chapter govern if the provisions of chapter 317A conflict with this chapter. The association may operate under the approved plan of operation and shall be governed in accordance with this chapter and may operate in accordance with chapter 317A. If the association incorporates

as a nonprofit corporation under chapter 317A, the filing of the plan of operation meets the requirements of filing articles of incorporation.

The association, its transactions, and all property owned by it are exempt from taxation under the laws of this state or any of its subdivisions, including, but not limited to, income tax, sales tax, use tax, and property tax. The association may seek exemption from payment of all fees and taxes levied by the federal government. Except as otherwise provided in this chapter, the association is not subject to the provisions of chapters 14, 60A, 62A, and 62P. The association is not a public employer and is not subject to the provisions of chapters 179A and 353. The board of directors and health carriers who are members of the association are exempt from sections 325D.49 to 325D.66 in the performance of their duties as directors and members of the association. The risk adjustment association is subject to the open meeting law.

Sec. 12. Minnesota Statutes 1994, section 62Q.03, subdivision 7, is amended to read:

Subd. 7. [PURPOSE OF ASSOCIATION.] The association is ~~established to carry out the purposes of subdivision 1, as further elaborated on by the implementation report described in subdivision 5 and by legislation enacted in 1995 or subsequently.~~ established to develop and implement a private sector risk adjustment system.

Subject to state oversight set forth in subdivision 10, the association shall:

(1) develop and implement comprehensive risk adjustment systems for individual, small group, and Medicare Supplement markets consistent with the provisions of this chapter;

(2) submit a plan for the development of the risk adjustment system which identifies appropriate implementation dates consistent with the rating and underwriting restrictions of each market, recommends whether transfers attributable to risk adjustment should be required between the individual and small group markets, and makes other appropriate recommendations to the commissioners of health and commerce by November 5, 1995;

(3) develop a combination of a demographic risk adjustment system and payments for targeted conditions;

(4) test an ambulatory care groups (ACGs) and diagnostic cost groups (DCGs) system, and recommend whether such a methodology should be adopted;

(5) fund the development and testing of the risk adjustment system;

(6) recommend market conduct guidelines; and

(7) develop a plan for assessing members for the costs of

administering the risk adjustment system.

Sec. 13. Minnesota Statutes 1994, section 62Q.03, subdivision 8, is amended to read:

Subd. 8. [GOVERNANCE.] (a) The association shall be governed by an interim 19-member board as follows: one provider member appointed by the Minnesota Hospital Association; one provider member appointed by the Minnesota Medical Association; one provider member appointed by the governor; three members appointed by the Minnesota Council of HMOs to include an HMO with at least 50 percent of total membership enrolled through a public program; three members appointed by Blue Cross and Blue Shield of Minnesota, to include a member from a Blue Cross and Blue Shield of Minnesota affiliated health plan with fewer than 50,000 enrollees and located outside the Minneapolis-St. Paul metropolitan area; two members appointed by the Insurance Federation of Minnesota; one member appointed by the Minnesota Association of Counties; and three public members appointed by the governor, to include at least one representative of a public program. The commissioners of health, commerce, human services, and employee relations shall be nonvoting ex officio members.

(b) The board may elect officers and establish committees as necessary.

(c) A majority of the members of the board constitutes a quorum for the transaction of business.

(d) Approval by a majority of the board members present is required for any action of the board.

(e) Interim board members shall be appointed by July 1, 1994, and shall serve until a new board is elected according to the plan of operation developed by the association.

(f) A member may designate a representative to act as a member of the interim board in the member's absence.

Sec. 14. Minnesota Statutes 1994, section 62Q.03, is amended by adding a subdivision to read:

Subd. 8a. [PLAN OF OPERATION.] The board shall submit a proposed plan of operation by August 15, 1995, to the commissioners of health and commerce for review. The commissioners of health and commerce shall have the authority to approve or reject the plan of operation.

Amendments to the plan of operation may be made by the commissioners or by the directors of the association, subject to the approval of the commissioners.

Sec. 15. Minnesota Statutes 1994, section 62Q.03, subdivision 9, is amended to read:

Subd. 9. [DATA COLLECTION AND DATA PRIVACY.] ~~The board of the association shall consider antitrust implications and establish procedures to assure that pricing and other~~

~~competitive information is appropriately shared among competitors in the health care market or members of the board. Any information shared shall be distributed only for the purposes of administering or developing any of the tasks identified in subdivisions 2 and 4. In developing these procedures, the board of the association may consider the identification of a state agency or other appropriate third party to receive information of a confidential or competitive nature.~~ The association members shall not have access to unaggregated data on individuals or health plan companies. The association shall develop, as a part of the plan of operation, procedures for ensuring that data is collected by an appropriate entity. The commissioners of health and commerce shall have the authority to audit and examine data collected by the association for the purposes of the development and implementation of the risk adjustment system. Data on individuals obtained for the purposes of risk adjustment development, testing, and operation are designated as private data. Data not on individuals which is obtained for the purposes of development, testing, and operation of risk adjustment are designated as nonpublic data. Except for the proposed and approved plan of operation, the risk adjustment methodologies examined, the plan for testing, the plan of the risk adjustment system, minutes of meetings, and other general operating information are classified as public data. Nothing in this section is intended to prohibit the preparation of summary data under section 13.05, subdivision 7. The association, state agencies, and any contractors having access to this data shall maintain it in accordance with this classification. The commissioners of health and human services have the authority to collect data from health plan companies as needed for the purpose of developing a risk adjustment mechanism for public programs.

Sec. 16. Minnesota Statutes 1994, section 62Q.03, subdivision 10, is amended to read:

Subd. 10. [~~SUPERVISION~~ STATE OVERSIGHT OF RISK ADJUSTMENT ACTIVITIES.] The association's activities shall be supervised by the commissioners of health and commerce. The commissioners shall provide specific oversight functions during the development and implementation phases of the risk adjustment system as follows:

(1) the commissioners shall approve or reject the association's plan for testing risk adjustment methods, the methods to be used, and any changes to those methods;

(2) the commissioners must have the right to attend and participate in all meetings of the association and its work groups or committees, except for meetings involving privileged

communication between the association and its counsel as permitted under section 471.705, subdivision 1d, paragraph (e);

(3) the commissioners shall approve any consultants or administrators used by the association;

(4) the commissioners shall approve or reject the association's plan of operation; and

(5) the commissioners shall approve or reject the plan for the risk adjustment system described in subdivision 7, clause (2).

If the commissioners reject any of the plans identified in clauses (1), (4), and (5) of this subdivision, the directors shall submit for review an appropriate revised plan within 30 days.

Sec. 17. Minnesota Statutes 1994, section 62Q.03, is amended by adding a subdivision to read:

Subd. 12. [PARTICIPATION BY ALL HEALTH PLAN COMPANIES.] Upon its implementation, all health plan companies, as a condition of licensure, must participate in the risk adjustment system to be implemented under this section.

statutes, sections 252.40 to 252.47; and

(6) semi-independent living services under Minnesota Statutes, section 252.275.

Sec. 118. [MANAGED CARE RATE SETTING METHODOLOGY.]

Subdivision 1. [DEVELOPMENT.] The commissioner of human services, in conjunction with the rate setting task force established in subdivision 2, shall develop a prospective rate setting methodology for implementation on January 1, 1998. The methodology must incorporate the public program risk adjustment mechanism and, at a minimum, take into account the following factors:

(1) costs of ensuring appropriate access to health care services in all counties;

(2) costs of medical education, disproportionate share payments, provisions for federally qualified health care centers, rural health clinics, and other adjustors historically provided for in the fee-for-service payments to specific providers;

(3) health status;

(4) statistically valid regional utilization patterns as well as population characteristics;

(5) the benefit set to be provided through the prepaid medical assistance program; and

(6) utilization demands resulting from program changes and newly created access to care.

Subd. 2. [RATE SETTING TASK FORCE.] The commissioner shall establish a task force consisting of representatives of health plans, public program providers, disproportionate share and teaching hospitals, independent actuaries, counties, and consumers, to develop recommendations for a prospective rate setting methodology with a risk adjustment mechanism to be implemented by January 1, 1998. The task force shall include at least one representative of each regional coordinating board established under section 62J.09. Fifty percent of the provider, county, and consumer members shall be from non-metro counties. The commissioner and task force shall jointly deliver

a progress report to the legislature by January 15, 1996, and a final methodology proposal to the legislature by December 15, 1996.

Sec. 119. [JOINT PURCHASER DEMONSTRATION PROJECTS.]

Subdivision 1. [DEMONSTRATION PROJECTS.] A county or counties may apply or the commissioner may solicit a demonstration project or projects for a state-county partnership as joint purchasers for services provided to eligible individuals under medical assistance, general assistance medical care, state health and social service grants, and county funds for these or other participants. Individual county staff who are employed by a publicly owned health plan that intends to respond to the request for proposal are prohibited from reviewing, critiquing, or approving any proposals submitted in accordance with this section. As part of this project, the commissioner, in cooperation with the county boards, must explore options for various purchasing models including contracting directly with providers or provider networks. The commissioner retains total responsibility for the medical assistance and general assistance medical care contracts.

Subd. 2. [OBJECTIVES.] The objective of the demonstration project is to promote the development of local provider networks; further define the county role and authorities in providing publicly reimbursed health services, including services reimbursed by the county; to provide better coordination of services; and to identify costs and methods to reduce cost-shifting.

Subd. 3. [PARTICIPATING COUNTIES.] Carlton, Cook, Koochiching, Lake, and Saint Louis counties shall be allowed to participate in joint purchasing demonstration projects at the option of their county boards. Any county may also participate in a joint purchasing demonstration project, which may include county employees, at the option of the county board.

Sec. 120. [DEMONSTRATION PROJECT TO TEST ALTERNATIVES TO DELIVERY OF SERVICES TO HIGH-RISK MEDICAL ASSISTANCE RECIPIENTS.]

subdivision 2. The commissioner shall complete development of capitation rates for payments before delivery of services under this section is begun. For payments made during calendar year 1990 and later years, the commissioner shall contract with an independent actuary to establish prepayment rates.

By January 15, 1996, the commissioner shall report to the legislature on the methodology used to allocate to participating counties available administrative reimbursement for advocacy and enrollment costs. The report shall reflect the commissioner's judgment as to the adequacy of the funds made available and of the methodology for equitable distribution of the funds. The commissioner must involve participating counties in the development of the report.

Sec. 94. Minnesota Statutes 1994, section 256B.69, is amended by adding a subdivision to read:

Subd. 5a. [MANAGED CARE CONTRACTS.] Managed care contracts under this section, section 256.9363, and section 256D.03, shall be entered into or renewed on a calendar year basis beginning January 1, 1996. Managed care contracts which were in effect on June 30, 1995, and set to renew on July 1, 1995, shall be renewed for the period July 1, 1995 through December 31, 1995 at the same terms that were in effect on June 30, 1995.

Sec. 95. Minnesota Statutes 1994, section 256B.69, is amended by adding a subdivision to read:

Subd. 5b. [PROSPECTIVE REIMBURSEMENT RATES.] For prepaid medical assistance and general assistance medical care program contract rates effective January 1, 1996, through December 31, 1996, capitation rates for nonmetropolitan counties shall on a weighted average be no less than 85 percent of the capitation rates for metropolitan counties, excluding Hennepin county.

Sec. 96. Minnesota Statutes 1994, section 256B.69, subdivision 6, is amended to read:

Subd. 6. [SERVICE DELIVERY.] (a) Each demonstration provider shall be responsible for the health care coordination for eligible individuals. Demonstration providers:

(1) shall authorize and arrange for the provision of all

amended by adding a subdivision to read:

Subd. 21. [PREPAYMENT COORDINATOR.] The local agency shall designate a prepayment coordinator to assist the state agency in implementing this section and section 256D.03, subdivision 4. Assistance must include educating recipients about available health care options, enrolling recipients under subdivision 5, providing necessary eligibility and enrollment information to health plans and the state agency, and coordinating complaints and appeals with the ombudsman established in subdivision 18.

Sec. 102. Minnesota Statutes 1994, section 256B.69, is amended by adding a subdivision to read:

Subd. 22. [IMPACT ON PUBLIC OR TEACHING HOSPITALS AND COMMUNITY CLINICS.] (a) Before implementing prepaid programs in counties with a county operated or affiliated public teaching hospital or a hospital or clinic operated by the University of Minnesota, the commissioner shall consider the risks the prepaid program creates for the hospital and allow the county or hospital the opportunity to participate in the program, provided the terms of participation in the program are competitive with the terms of other participants.

(b) Prepaid health plans serving counties with a nonprofit community clinic or community health services agency must contract with the clinic or agency to provide services to clients who choose to receive services from the clinic or agency, if the clinic or agency agrees to payment rates that are competitive with rates paid to other health plan providers for the same or similar services.

Sec. 103. [256B.691] [RISK-BASED TRANSPORTATION PAYMENTS.]

Any contract with a prepaid health plan under the medical assistance, general assistance medical care, or MinnesotaCare program that requires the health plan to cover transportation services for obtaining medical care for eligible individuals who are ambulatory must provide for payment for those services on a risk basis.

Sec. 104. Minnesota Statutes 1994, section 256D.03, subdivision 3, is amended to read:

Attachment B

Membership of the Public Programs Risk Adjustment Work Group

Public Programs Risk Adjustment Work Group Members

Appointing Agency	*Member*
1. MN Association of Counties	Marilyn Krueger St. Louis County
2. MN Association of Counties	Mary Tambornino Hennepin County
3. MN Council of HMOs (rural with less than 50,000 enrollment)	Steve Bjorum First Plan HMO
4. MN Council of HMOs (At least 50% enrollment in public program)	Mark Hudson UCare Minnesota
5. MN Council of HMOs (At least 50% enrollment in public program)	Al Johnson Metropolitan Health Plan
6. MN Council of HMOs	Bob Power HealthPartners
7. MN Council of HMOs	Patti Warden Allina Health System
8. MN Hospital Association (Major disproportionate share hospital)	Tom Syverson HCMC
9. MN Hospital Association	John Tomlin Gillette Children's Hospital
10. MN Medical Association	Mark Liebow Mayo Clinic
11. Governor's Office	Roberta Opheim Ombudsman for MH/MR
12. Governor's Office	Rolf Jacobson Como Park Lutheran Church
13. Governor's Office	Sandra Rasmussen Fairview Healthcare Services
14. Governor's Office	Stan Hill Retired Actuary
15. Governor's Office	Maureen O'Connell Mid-MN Legal Assistance
16. Governor's Office	Gayle Hallin Bloomington Dept. of Health
17. Governor's Office	Chuck Dustrud Scott County Public Health
18. Governor's Office	Debbie Chase Hennepin County Health Policy

Attachment C

Final Report from Park Nicollet Medical Foundation

Public Programs Risk Adjustment Project

Report to the Minnesota Department of Health

on Implementation Recommendations for a

Risk Adjusted Reimbursement Methodology for Public Programs

December 1995

Prepared by

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Jinnet Fowles
Michael Finch
Willard Manning

Supported by a grant from the Robert Wood Johnson Foundation

Table of Contents

Summary of Recommendations

4.1 Implement a risk adjustment mechanism that initially incorporates demographic data, eligibility data and diagnosis data from both the ambulatory and inpatient settings.

4.2 Develop and maintain a data base sufficient for risk adjustment.

4.2.1 Require that uniform claims and encounter data elements generally conforming to the HCFA 1500 and UB92 specification be routinely submitted to DHS by participating health plans for prepaid programs.

4.2.2 Maximize use of eligibility data for inclusion in risk adjustment models.

4.2.3 Develop editing and auditing functions to assure data timeliness, completeness and quality.

4.3 Establish a joint DHS and MDH risk data users' group that includes users such as actuaries, economists and analysts responsible for rate setting and risk adjustment as well as representatives from the programming staff who receives data from the plans, assure data quality and create the files for analysis and risk adjustment.

4.4 The risk adjustment cost estimation process should conform with the procedures of the underlying rate setting process whenever possible, including using the same cost data and applying the same methods of estimating costs.

4.5 Update the risk adjustment model cost weights annually as part of the rate setting process.

4.6 Consider a mixed prospective - retrospective payment adjustment mechanism if acceptable from both administrative and financial perspectives.

1. Introduction and Background

The State of Minnesota has made great strides toward the dual goals of global heath care coverage for its citizens and reform of the health care market; however, there is still much to be done. One of the foremost concerns for policy makers and health care providers revolves around the issue of risk adjustment as a means to provide "fair" payment for health plans in a reformed environment.

In their joint report to the legislature, the Commissioners of Health and Commerce set forth a series of recommendations for the implementation of a risk adjusted reimbursement system, but stopped short of recommending a particular system. They suggested that initial implementation of a risk adjusted reimbursement system take place within defined market segments and suggested three possibilities: the individual and small group market, State run public programs (i.e., Medical Assistance, General Assistance Medical Care and MinnesotaCare) and Medicare supplements. A second recommendation was to limit the scope of possible risk adjustment methodologies initially to basic demographic and targeted medical conditions, due to anticipated data availability problems. The Commissioners' report identified other more comprehensive potential risk adjustment systems as candidates for implementation once data were available for these methods. Many of the recommendations contained in the Commission's report were adopted by the legislature and included in the 1995 MinnesotaCare law.

The State of Minnesota Department of Health (MDH) together with the Minnesota Department of Human Services (DHS) have been given the responsibility to recommend a risk adjustment system for prepaid, publicly funded health care programs including Medical Assistance (MA), General Assistance Medical Care (GAMC) and MinnesotaCare. Statewide implementation of a program for MA, GMAC and MinnesotaCare is planned for 1998. This program will be similar to the Department of Human Services' current Prepaid Medical Assistance Program (PMAP), but is intended to cover all recipients.

The current PMAP is operating in eight of Minnesota's 87 counties and includes the following eligibility categories: Aid to Families with Dependent Children (AFDC), Needy Children, Pregnant Women and Aged. Currently excluded are: people who are blind and disabled, beneficiaries residing in state institutions, community based medically needy who are at risk of spend-down, and several special categories involving few recipients. Some of the currently excluded categories will be included in the Prepaid Medicaid Program in 1998. The most notable category from the perspective of risk adjustment is the disabled population, which includes physically, mentally and developmentally disabled recipients. The largest program category based on 1993 data is AFDC which had 403,995 recipients. Although the aged and

disabled populations were 56,706 and 59,268 respectively, the total health care expenditures for each of those categories are nearly double those of AFDC. The remaining categories represent a heterogeneous group totaling only 19,500 recipients.

2. Risk Adjusted Payment in Commercial and Prepaid Public Program Applications

2.1 Risk-Adjusted Payment in Commercial Applications

Risk adjustment is considered to be an important, even critical, component of health care reform. Much of the policy and research activity directed at developing and implementing risk adjusted payment systems has addressed applications primarily in the commercial health care sector. More specifically, risk adjustment is seen as a means to promote competition based on quality and efficiency rather than a means for competing health plans to avoid high risk enrollees. Risk adjusted payment would operate in managed competition like a market or risk pool. In these examples, the pool administrator would transfer funds from competing plans with lower risk enrollees to plans with higher risk enrollees based upon an assessment of each plan's relative risk compared to the pool average.

In the commercial sector, risk adjustment involves: 1) assessing risk in primarily employed populations and 2) adjusting payment in coordination with a premium bidding process that is under some regulated rating and underwriting constraints (e.g., community rating). In contrast, risk adjustment in prepaid public programs involves: 1) assessing risk in populations with high morbidity and socio-economic burden and 2) adjusting payment to health plans by a central agency.

Prepaid public health care programs in Minnesota have involved a government administered rate setting process that determines the premium that health plans will be paid. Plans do not usually bid their own rate, although DHS is considering such a system. Rates are adjusted for basic demographic factors, categorical aid program, geographical region and institutional status. This rate setting process alone yields a type of risk adjusted payment; however, rates are not adjusted for all of the factors that are important to determining the risk of the population. These risk rating methods can be improved by expanding the set of risk factors used in the model. The primary objective of this project is to improve the risk rating methods used by the public program sponsor which, in Minnesota, is the Department of Human Services.

2.2 Risk-Adjusted Payment in Prepaid Public Programs

In expanding the risk factors used in risk adjustment, research on alternative risk adjustment methods has shown that diagnostic information on recipients will significantly improve the risk assessment model based on demographics (Fowles, 1994) and should be included in a risk

adjustment mechanism for public program risk adjusted rate setting. Diagnosis based risk adjustment models must be sensitive to the high prevalence of chronic disease, co-morbidity and trauma found in some public program populations.

In addition to expanding the risk factors used in risk rating, public program risk adjustment mechanisms must address special public program issues that may require methodological approaches that may not be needed in the commercial sector. For example, partial year enrollment due to eligibility status changes is of particular interest because of the significantly greater turnover in eligibility in public programs compared with commercial populations. The concern rests not simply with the large numbers of partial year enrollees but also with the reasons that enrollees gain or lose eligibility.

Other potential risk factors, such as functional impairment, may also predict a greater need for health care or greater costs in providing health care. Social factors that introduce barriers to obtaining health care, such as language, transportation, and cultural beliefs and practices, may impose an additional health care cost burden. These factors, though typically difficult to measure, should be considered for inclusion in the risk adjustment mechanism.

2.3 Risk Adjustment for Public Programs in Other States and Projects

Most states are in some phase of planning or implementing 1115 Waiver programs aimed at moving their public health care programs into managed care. Some are also implementing reforms in the small group and individual private insurance markets. For both types of state initiatives, risk adjusted payment systems are being studied or implemented. Nationally, there are many research and development initiatives funded by the federal government or private foundations that are aimed at developing improved risk adjustment models for Medicare and Medicaid.

States other than Minnesota are developing risk adjustment payment mechanisms. These mechanisms differ primarily on the basis of data availability and the state's judgment about how much change from traditional actuarial methods is needed or acceptable. Minnesota is in a position to implement a risk adjustment model with superior predictive performance because of the extensive experience throughout the state with managed care and the data and clinical reporting capabilities of the health plans.

According to HCFA, as of June 1994, states offered Medicaid recipients the choice of enrolling in a managed care plan. There was nearly a 20% increase in states pursuing 1115 waivers in 1994 over 1993. As of June 1994, 26 states enrolled AFDC recipients in managed care plans, and 14

enrolled SSI, disabled and/or elderly in similar arrangements. Although AFDC recipients represent 70% of an average state's Medicaid population, they represent typically only 30% of the state's Medicaid costs. The remaining 70% of state's Medicaid costs are related to the disabled and over age 65 population.

States are beginning to experiment with mandatory enrollment of the disabled and aged in managed care plans. In 1995, HCFA reported that six states included the elderly and/or disabled in their 1115 waiver requests.

There are several HCFA demonstrations worthy of note that are focusing on the elderly and disabled populations:
PACE: This demonstration is being conducted in seven states. The demonstration capitates dually eligible elderly and disabled who are in long-term care settings. The PACE sites receive capitation from Medicare (HCFA) and the state Medicaid agencies. The capitation includes coverage of the nursing home per diem.

Social HMO II: This new demonstration is located in five states. However, it is an extension of the first HMO demonstration concept that began in the early 1980s with four HMOs and focused on serving the frail elderly. The second generation SHMO also seeks to demonstrate risk based reimbursement and a geriatric/chronic care approach to Medicare eligibles in managed care plans. It can include seniors and the disabled. It also seeks to serve those who are dually eligible and is working with states to include the Medicaid piece.

HMOs are extremely concerned about serving the frail elderly or disabled populations. These populations are politically sensitive for states, represent public relations concerns for plans and have inherently unique health needs. Of great concern is the variability in health care costs. Within Medicaid, there is enormous cost variability. With eligibility, age, gender and institutional categories for the Medicaid elderly and disabled, traditional captitation rate predictability of actual health care costs is actuarially risky.

To address the problem of high variability of cost and unique health needs of the Medicaid populations in general, an improved risk adjustment methodology is being investigated in several states. A few notable examples of risk adjustment methods under current consideration by states for Medicaid and/or small employer group markets are:

Ohio: This state is implementing a risk based reimbursement system based on prior utilization. Although prior utilization is the best predictor of future utilization, the incentives for health plans

under this system are similar to fee-for-service (FFS) incentives. This approach is simple and somewhat reliable, but it doesn't meet the Minnesota objectives to have payment reflect enrollees' health care *needs* rather than the services that were actually provided.

Washington: The University of Washington, with an RWJ grant, is implementing a risk adjustment methodology for the Washington Health Authority. Technical assistance for this project is being provided by the same staff from the Park Nicollet Medical Foundation and University of Minnesota who are assisting Minnesota in its risk adjustment RWJ grant. This project has evaluated a number of alternate models, including a diagnoses based model such as Ambulatory Care Groups (ACGs) and pharmacy data, as predictive of costs. The diagnoses based systems performed well, with predictive performance similar to that found in other studies. Since not all participating plans in the state provide ambulatory diagnoses data, the risk adjustment options available to them were necessarily constrained.

California: The Health Insurance Plan of California (HIPC) is developing, with RWJ funding, a risk adjustment mechanism based on inpatient diagnoses for high cost marker conditions, demographics and household size. The inability of some plans to produce ambulatory care diagnoses data has constrained the model options to those that focus only on inpatient data.

New York: New York was one of the first states to implement a risk adjusted payment mechanism that reimbursed plans a specified amount for each case of a small set of very high cost medical conditions. Reimbursement depends on a health plans' ability to identify those cases that require medical record data. The difficulties encountered with this system have helped form the risk adjustment methods used by other states. This approach is similar to the concept of reinsurance.

Missouri: This state is developing, again with RWJ funding, a chronic illness based reimbursement mechanism for its voluntary Medicaid disabled program. This diagnosis based approach will be considered for Minnesota.

3. Minnesota Public Programs Risk Adjustment Implementation Planning Process

The Minnesota Department of Health has contracted with the Park Nicollet Medical Foundation and the University of Minnesota to provide technical assistance in planning and testing a risk adjustment mechanism for the public managed care program. The program will be implemented in 1998. The objectives of the initial phase of the project are to:

Develop a plan for testing and implementing a basic demographic, expanded demographic, and diagnosis based risk adjustment mechanism.[1]

Develop an analytical data base of public program eligibility and claims/encounter data for model testing. Recommend a data set for implementation, evaluation and updating.

Develop a population survey protocol, including a design and analysis plan and a draft instrument for a survey. The survey will be conducted in 1996 to examine the predictive performance of risk factors, such as functional status and social factors that cannot be measured with medical claims and encounter data. These risk factors would be evaluated for possible inclusion in the eligibility application form and then added to the computerized eligibility data set.

Because the risk adjustment mechanism must be consistent with DHS rate setting policies and procedures, joint planning between MDH and DHS was required. For the most part, the rate setting reform initiatives have not sufficiently progressed so that the context that will contain the risk adjustment mechanism can be firmly established. Additionally, the necessary working relationships between MDH and DHS technical staff had not been established. Therefore, the planning process for a risk adjustment mechanism initially required the establishment of working relationships and communication linkages between MDH and DHS.

To establish a working relationship, the Department of Health included administrative and rate setting staff from the Department of Human Services on both the Risk Adjustment Project Planning Committee and on the legislatively mandated, MDH led, Public Program Risk Adjustment Workgroup. These and other participants are described below.

MDH Project Planning Committee: This multi-disciplinary group is composed of staff from both MDH and DHS as well as the project's technical contractors. This committee has met frequently since the beginning of the project. The committee has used the meetings to identify issues, exchange information, assign project tasks and manage the project. Issues and tasks addressed by the committee included sharing information about risk adjustment, the current rate setting and eligibility determination processes and working on data base development problems.

Public Programs Risk Adjustment Workgroup: In September 1995, the Public Programs Risk Adjustment Workgroup was established by legislation and initiated by MDH and DHS to provide

[1] the proposal had also included an additional objective to design a diagnosis-based model in two phases. We found that the anticipated data constraints that had dictated this two-phased approach no longer exist.

input into the risk adjustment planning process. This group comprises representatives of health plans, consumers and staff from the DHS and the MDH. To date, this group has discussed the rationale and methods of risk adjusted reimbursement and provided input to staff on potential risk factors for risk adjustment, including factors that will be measured in the population risk survey.

The project has also linked with related initiatives that have been directed by state health care reform legislation, but are being administered outside MDH. These initiatives include the public programs' Rate Setting Task Force administered by DHS and the private sector risk adjustment initiative, administered by the Risk Adjustment Board, a public - private sector board established by the legislature.

Public Programs Rate Setting Task Force: This Task Force has been charged by DHS to review and recommend changes to the PMAP rate setting process. One of the Task Forces' directives is to explore "competitive bidding" to replace the current rate setting process. The risk adjustment project staff has been monitoring and providing input to the rate setting Task Force.

Minnesota Risk Adjustment Board Association: The Minnesota Risk Adjustment Board Association developed recommendations on a risk adjustment mechanism for the private small group, individual markets and Medicare Supplement. MDH staff and project contract staff were actively involved in this process, which resulted in a November 1995 report. The Board has not recommended a date for implementing a risk adjustment mechanism, because recent legislation rescinded previous legislature provisions related to insurance market reforms, such as community rating. This Board's report has been considered in the planning of the public programs risk adjustment mechanism.

4. Recommendations on Implementing a Risk Adjustment Mechanism

4.1 Implement a risk adjustment mechanism that initially incorporates demographic data, eligibility data and diagnosis data from both the ambulatory and inpatient settings. The specific model should be determined by an empirical evaluation of alternative models. MDH and DHS will evaluate these models using Minnesota public programs data. Social factors that may be added to the model will be identified. These factors will be added to the eligibility application process, if appropriate.

Age, gender and eligibility categories are currently used in the rate setting process. There is additional information available in the eligibility data base that is not currently used in rate-setting, but could be useful as risk adjusters. These variables should be evaluated. Research

has shown that risk assessment models that include diagnosis information perform statistically better than models restricted to demographic information. Existing risk assessment systems use diagnosis information from claims and encounter data from ambulatory and inpatient settings to determine the risk of each person enrolled in a population. The most promising of these systems are: the Johns Hopkins' Ambulatory Care Groups (ACGs), the expanded Diagnostic Cost Groups, and Chronic Disease Categories being developed by Richard Kronick for the state of Missouri's initiative to enroll the disabled population in managed care. Each of these methods should be evaluated for the Minnesota public programs' population.

Alternative risk models that conform to this recommendation should be evaluated based upon these criteria: prospective predictive performance, retrospective predictive performance, bias (degree to which the model over/underestimates sub-populations' expenditures) and reliability.

Social factors will be evaluated with a survey. Any important, unique factors will be considered for inclusion in the eligibility application and eligibility data base.

4.2 Develop and maintain a data base sufficient for risk adjustment

4.2.1 Require that uniform claims and encounter data elements generally conforming to the HCFA 1500 and UB92 specification be routinely submitted to DHS by participating health plans for prepaid programs.

This will be a vital part of the risk adjustment system as well as critical for DHS management of a managed care program.

4.2.2 Maximize use of eligibility data for inclusion in risk adjustment models.

4.2.3 Develop editing and auditing functions to assure data timeliness, completeness and quality.

Diagnosis and utilization data availability and quality are critical to the administrative feasibility of risk assessment and adjustment. A review of several leading risk adjustment initiatives, including those in New York, Washington and California, demonstrate that the selection of a model for risk assessment is largely influenced by data availability. More specifically, ambulatory diagnoses are required for some of the best performing models, such as Ambulatory Care Groups and Expanded Diagnostic Cost Groups. If ambulatory diagnosis data are not uniformly available from participating health plans, the only recourse is to implement a limited assessment model based upon inpatient claims data, which are uniformly available. This approach is being implemented by the Health Insurance Plan of California (HIPC). Health plans in Minnesota have indicated that they do have ambulatory data available and could provide it to DHS for risk adjustment purposes.

Other data sources for risk indicators limit the performance or feasibility of risk adjustment. For example, where medical record data must be used, the number of indicator medical conditions must be limited to a very few high cost conditions because of the high cost of data collection. This is the approach taken in the New York state model. No major risk adjustment initiative of which we are aware is seriously considering a health status survey-based risk assessment model for commercial or Medicaid populations. The primary reason is because survey data collection and auditing are considered too costly and difficult.

For Minnesota's public programs, these data issues will not constrain the state from implementing one of the more comprehensive diagnosis classification systems such as ACGs, DCGs or Chronic Condition Categories. Participating PMAP plans can produce encounter and claims ICD-9 data on a timely basis. The availability of public programs' risk adjustment data differs from that of Minnesota's commercial risk adjustment initiative. In the commercial market, it was concluded that complete and reliable ambulatory data on each enrollee are not currently available among the smaller insurance companies that would be participating in the small group and individual market. The health plans that will be participating in PMAP, however, all have the capability of producing ambulatory ICD-9 data. They currently produce these data for self-funded payors and for quality assessment such as HEDIS.

A common myth is that moving from fee-for-service to capitation implies that the purchaser cannot, nor should not, expect to submit encounter data. Early in the history of managed care, HMOs that capitated their providers made the mistake of assuming that ambulatory data were unnecessary. However, they discovered quickly that they could not implement necessary utilization and quality assessment analyses without these data. This management use of claims and encounter data also facilitates financial management.

With capitation, however, comes the problem of maintaining encounter data quality, because each claim is not being adjudicated for a FFS payment. The managed care industry has developed software that applies automatic logical edits to encounter data. In addition, the use of standard claims auditing methods based on sampling and medical record review can assure encounter data accuracy, including ICD-9 coding validation. Finally, in a risk adjustment system that relies on diagnostic information, the health plans have a strong financial incentive to produce complete data. This financial incentive should help assure a reliable flow of data from the participating plans.

4.3 Establish a joint DHS and MDH risk data users' group that includes users such as actuaries, economists and analysts responsible for rate setting and risk adjustment as well as representatives from the programming staff who receives data from the plans, assure data quality and create the files for analysis and risk adjustment.

Another critical administrative feasibility issue is the need to maintain a timely, reliable and accurate data base for ongoing risk adjustment and model updates. Data users' groups have been critical, organizational entities for managed care companies as they have attempted to increase the usefulness of their large, complex transaction-oriented claims and enrollment data processing systems. The users' groups can facilitate the development of more sophisticated management information reports and analyses. It is difficult for any individual programmer to know enough about all of the data bases or for an individual user to know enough about the management uses of the data to produce data files that meet user specifications. Without a data users' group, composed of multiple users and managers of data who meet on a routine basis, maintaining a data base for rate setting, risk adjustment, model updating and economic analysis may prove difficult and time consuming, characterized by lengthy delays and rework.

As DHS moves from a FFS claims processing mode into managed care and encounter data, it is the ideal time to establish systems that meet the complex new needs of risk adjustment, rate setting and oversight of managed care.

4.4 The risk adjustment cost estimation process should conform with the procedures of the underlying rate setting process whenever possible, including using the same cost data and applying the same methods of estimating costs.

4.5 Update the risk adjustment model cost weights annually as part of the rate setting process.

This is a routine function of the rate setting process. The demographic risk adjusters currently in use are updated annually based upon statewide data. The risk adjustment model should be updated in the same way to ensure that participating plans are adequately compensated for shifts in the risk profiles of the public populations they serve.

4.6 Payment Adjustment. Consider a mixed prospective - retrospective payment adjustment mechanism if acceptable from both administrative and financial perspectives.

Most diagnoses based risk adjustment models statistically perform better when applied retrospectively rather than prospectively. To achieve the best performance from these models, a fully retrospective risk adjustment would be advised. However, the desire to achieve maximum

statistical performance must be weighed against the desire to minimize the amount of funds that would be allocated to health plans through a retrospective settlement.

A frequently adjusted payment would allow the most accurate prospective payment possible and provide timely retrospective correction without introducing an unacceptably high level of revenue uncertainty for participating health plans. The risk assessment mechanism can be updated for each recipient even monthly, if warranted.

5. Risk Assessment Models

Alternative risk assessment methods will be evaluated to determine the optimal model for PMAP. Risk assessment during the evaluation period will be conducted using eligibility, enrollment and FFS claims data for public clients, including people who are disabled. The limited number of current public program recipients enrolled in managed care plans limits our current ability to assess selection bias. However, data from the largest current participating plan in the largest participating county should include sufficient enrollment to determine the extent to which managed care utilization is different from FFS reimbursed care. Data from this health plan are being sought.

The following risk assessment models will be evaluated using cost and utilization data for a 12 month period (year 1) and for the subsequent 12 months (year two). Partial year eligibles will be included in the data base both for year 1 and year 2.

5.1 Basic demographic model

Age, gender and geographical categories are currently included as risk adjusters in the PMAP rate setting process. This basic demographic model will be evaluated to determine predictive performance as a baseline to compare the incremental improvement of other models.

5.2 Expanded demographic model

We will expand the use of data in the risk adjustment model to include eligibility categories as a risk adjuster and to consider the special partial year populations as described in section 6.

5.3 Diagnosis models

Three ICD-9 based methods will be evaluated. These methods include ACGs, DCGs and specified medical conditions.

Ambulatory Care Groups (ACGs) assign individuals to one of 51 mutually exclusive categories based upon diagnoses, age and gender. ACGs were developed merely a decade ago at Johns

Hopkins University. They were initially developed, in part, based on Medicaid data. Currently, they are the most prominent population based case mix system and are used by over 80 managed care companies. They are also being considered for implementation by several states, the federal bureau of Health Care Financing Administration (HCFA) and several foreign countries.

ACGs perform statistically as well as, or better than, any similar system. However, they will need to be tested using Minnesota Medicaid data to determine their applicability for Minnesota's public programs.

ACGs are being further refined by Johns Hopkins and Lewin/VHI under a grant from HCFA. These enhancements are being conducted using Washington State Medicaid data, Twin Cities HMO data and New York Blue Cross data. These enhancements will be of interest to this project. ACGs are already considered one of the most predictive of all models for risk assessment, and these modifications should improve ACGs significantly. Investigators from Johns Hopkins will provide input for our evaluation when they are able.

Diagnostic Cost Groups (DCGs) were developed about the same time as ACGs by researchers at Boston University using Medicare data. Individuals with an inpatient admission are assigned to one of eight diagnostic categories based on inpatient diagnoses. DCGs are used to predict total medical costs, not only inpatient costs.

The DCG system was developed for Medicare and currently has been applied using only inpatient diagnoses. Development of an under-65 population version using ambulatory data as well as inpatient data is nearing completion by investigators at Boston University. We will attempt to include the latest version of DCGs available and hope to receive input from the developer for our analysis.

Specified medical conditions such as the chronic conditions approach taken by Richard Kronick for the state of Missouri, may be included alone or in combination with ACGs or DCGs. Richard Kronick, the University of California in San Diego, has developed a method of classifying chronic illness diagnoses to predict costs for the disabled population using data from states including Ohio, Wisconsin and Minnesota. These categories were further refined in a project for the Missouri State Medical Agency.

5.4 Socio-economic Factors

We will test recipient economic and cultural factors that are barriers to obtaining health care, such as language or transportation availability, and that require additional expenditures by accountable plans. Many of these factors are available through the DHS eligibility data base. Other factors will be assessed with a population risk survey (see section on Data Collection). Although a survey-based assessment is not recommended for risk adjustment, any important and unique risk factors that are identified in the survey will be considered for addition to the eligibility application form and data base.

6. Partial-year Eligibility Problems

6.1 People Who are Enrolled Part of the Year as an Estimation Issue

Much of the work on risk adjustment has used data that span fixed periods of time, e.g., a year. This selection occurs because a year is the natural accounting period for many insurance plans. In part, such a choice is dictated by the estimation models that people have employed, most of which cannot deal directly with the issue of fractional or unequal periods of eligibility. However, in this work on risk adjustment for public programs, unequal periods of eligibility are very common. The population can change from month to month, and many recipients are eligible for only part of a year.

There are several ways of dealing with unequal periods of eligibility:

Annualize the data, and apply standard methods. This approach will yield biased and inefficient estimates. The annualized data do not fit the underlying assumptions for the commonly used statistical models (except for the negative binomial and Poisson regression models), and this misspecification can generate biased estimates. Further, there is no adjustment for the implicit unequal variances in the model. As a result, the estimates are inefficient, and the inference statistics may be biased as well.

Use the month as the period of analysis, and apply standard methods. Although technically this approach creates equal periods of time, the results are probably not robust. With annual data, expenditures are skewed enough to require special methods. The monthly data will be even more skewed. Models which work adequately for annual data will not work well with monthly data.

Use only the individuals with full years of eligibility, and apply standard methods. This approach will work only if the people who are enrolled part of the year behave exactly as the people who are enrolled a full year do, except over a shorter period of time. Such an assumption may be reasonable for some subpopulations (workers changing jobs), but they will not be for all (e.g., newborns and people who died during the period).

Develop separate models for the full year and part year people.

Our approach will be the last of these. Specifically, using individuals eligible for the full calendar or fiscal year, we will estimate models of utilization and expenditures as a function of the relevant risk adjusters and other covariates. Using the resulting parameter estimates, we will predict the annual expenditures for the people who are enrolled part of the year, and then pro-rate the prediction. That is, if the individual is eligible for six months, we will use one half of the annual prediction. Then, using only the partial year subsample, we will examine the difference between actual expenditures and the pro-rated expenditures for any systematic patterns that may be related to risk adjusters, reasons for change in eligibility and other factors.

However, the models for this substudy will be different from those in the main risk adjuster set to reflect both the smaller number of people who are enrolled part of the year and the more skewed distribution of their expenditures. We will test whether the mean of this residual is different from zero for newborns, individuals who died, new entrants into public programs, and individuals who are no longer eligible. We will also test whether the residual varies systematically with the length of time the subject has been eligible. If we find that some subgroups have mean residuals that are not significantly different from zero, we will recommend the use of the pro-rated payment. If they do differ systematically, the nature of the difference will be determined before suggesting a payment correction. For example, if new adult female participants in AFDC have higher expenses (due to pregnancy) for their first year of participation, the risk adjuster may be higher than that for an AFDC woman of the same age who had been enrolled in AFDC for at least a year.

One important, but still unresolved, problem is how best to do the estimation for the partial year people. Using the models estimated for the full year participants, we can predict what the partial year enrollees should have spent if they behaved like the corresponding full year individuals. One issue is that their residuals (= actual expenditure minus annual prediction pro-rated by time eligible) are likely to be more skewed than the expenditures for full year people. The easiest approach may be to do analysis of variance by subgroups, when the subgroups are large enough that one can get a reasonable estimate of the subsample mean. Another issue is that the residuals are likely to have unequal variance in the length of the period of eligibility. This will probably require the use of weighted least squares to get efficient estimates, and unbiased inference statistics. At a minimum, we will use Huber/White consistent estimates of the inference statistics. Further, we may attempt to use EGLS estimators to provide more efficient estimates of these differences.

6.2 Partial Year Enrollees as a Missing Data Issue.

People who are enrolled part of the year, especially the newly eligible, raise an additional problem in that they have no medical or claims history that can be tapped to generate case-mix adjusters. Someone who has never been on Medicaid will not have any records that indicate the presence or severity of illness. In the absence of a claims history, a diagnosis based risk adjustment system will treat all such new enrollees like the existing enrollees who are free of major diseases. Because many will have qualified based on illness or disease, it seems unlikely that these individuals will have the same case-mix as the longer term enrollees who are free of major diseases or disabilities.

Although formal medical histories and claims records may be missing, there may be information in the eligibility files that will allow the derivation of an interim set of case-mix adjusters. For example, new AFDC adult female enrollees are more likely to be pregnant than otherwise similar AFDC adult female enrollees with continuous enrollment. New enrollees entering the disability programs probably have a major condition that increases their health care costs. Assuming that their case-mix variables are zero will lead to a systematic underpayment for new enrollees who have a condition or illness. In the section of developing risk adjusters, we discuss our approach to dealing with this problem if Medicaid eligibility files do not provide a complete listing of health care conditions.

6.3 Special Cases of Partial Eligibility

Newborns: The usual expenses for maternity care will be a part of the mother's claims history. But starting with delivery, the care for the newborn child can be analyzed separately. Because of complications and birth problems, as well as routine post-natal well-baby care, an infant's first year of life can be more expensive than a comparable time for older infants and toddlers. In our model of demographic risk factors, we will place expenses for the child after the mother's discharge into the newborn's records. We will then analyze the data as we do with other partial year enrollees, checking the possibility that there should be a separate adjuster for newborns less than a year old.

Deaths: There is a lengthy literature on the cost of the last year of life (see Scitovsky and others) that suggests that the last year of life can be much more expensive than a non-fatal year. Thus, on average, we would expect that the risk adjustment mechanism will underpay the health plans for this group. We will estimate the magnitude of this discrepancy in our partial year analysis.

If the results indicate a discrepancy, we will have to decide how to adjust the payment. One alternative is to roll the cost into the regular risk adjuster using the probability of death by

age/gender/categorical aid group. This approach will cover the reimbursement issue as long as there is no imbalance across health plans in the death rate. A second alternative is to make a special risk adjustment class for death. This alternative approach could face two problems: (1) an incentive effect that could encourage deaths or discourage life-saving effort; and (2) a small sample precision problem.

People with no documented history: The absence of any medical, claims or eligibility claims adjusters could lead to a systematic bias for new enrollees. For the moment, we propose the following solution for new participants. First, we would use the standard age, gender, and categorical aid adjusters. Using the results of the analysis of transient populations described above, revise the payment upward or downward based on the length of time in the program for the first year of eligibility. After the first year, we would use whatever case-mix adjusters can be derived from claims and other records. If there is no history on the individual at that point, we will assume that the core demographic and categorical aid variables suffice.

Dual eligibles: Individuals with dual eligibility, such as simultaneous coverage from the VA, Medicare, or the Indian Health Service (IHS), may have a different pattern of Medicaid expenditures than the general Medicaid population. These three subgroups can either use providers who are not reimbursed by Medicaid (e.g., the VA and IHS), or have part of their expenditures reimbursed or paid by the other program (e.g., Medicare). Unfortunately, the state's management information system only contains information about dual eligibility for Medicare. Thus, the only amendment to the set of risk adjusters will be to include an indicator variable for dual eligibility with Medicare. Note that the preliminary estimates from Kronick, Dreyfus, et al. (1995) indicate that people with dual eligibility impose substantially lower costs on Medicaid than Medicaid-only people in Missouri.

7. Data Collection

7.1 Eligibility and Claims Data Base

We have available for analysis the eligibility and claims data for a two-year period, July 1, 1993 through June 30, 1995 (having allowed a six month lag for completion). The files represent the experience of the fee-for-service (non-managed care) recipients. The claims files include diagnoses, utilization and costs. The eligibility files include all the programmatic eligibility requirements. The first year data will be used for risk assessment measures, based on information in the eligibility data and the claims history. Both first and second year data will be used to estimate cost weights.

We also have the claims and eligibility data for the disabled for 1992 and 1993. These are the same data that Kronick used, in combination with information from other states, to investigate the degree to which chronic disease in the disabled population can predict resource use.

7.2 Minnesota Medicaid Risk Survey

A survey component was designed as part of the process of developing a risk assessment and risk adjustment methodology for the Minnesota Prepaid Program.

Survey Objectives

The purpose of the survey is to:

1) Assess the financial risk of segments of both the disabled and non-disabled eligible populations attributable to beneficiary characteristics that are difficult or impossible to assess with claims and encounter data;

2) Validate, where possible, the claims/encounter data-based risk assessment methods being considered for risk adjustment.

The survey is not intended to be the risk assessment mechanism. Rather, its role is to test the conclusions of the risk assessment system based on the claims and encounter data, and to provide information about additional beneficiary characteristics and their relative weight in predicting covered health care expenditures.

Intended Sample

The intended sample includes public program beneficiaries part of:

1) Aid to Families with Dependent Children population
2) Disabled (enrolled in Disabled) population
3) MinnesotaCare

The sample size will depend on the data collection methodology.

Process for Questionnaire Development

The first phase of survey development focused on defining the survey objectives and identifying the appropriate sample. This phase was initiated by the technical consultants and reviewed and expanded by staff from the MDH and the DHS.

The consultants also drafted a full list of potential constructs for survey content. These constructs were reviewed and edited by the State staff. The draft questionnaire includes: medical history, perceived general health status, functional status (self-care, self maintenance, social functioning, cognitive functioning, restricted activities), physical abilities and depression.

The technical consultants conducted a literature review and interviewed other experts in the field to assemble a set of relevant questionnaires and items that had been used with similar populations.

A draft survey was compiled and circulated to the public membership of the Public Programs Risk Adjustment Work Group (PPRAWG). While this questionnaire is written from the perspective of an adult, a version for parents of children and for other proxies will be developed.

At the most recent meeting of this group, the questionnaire was used as a stimulus to discuss modification of the items, deletions and additions. At this point, these suggestions are being used to redesign the questionnaire, preparing the instrument for cognitive testing. Further review and input is anticipated from this group.

The mode of administration is still being debated. Given a fixed budget for the surveys, telephone administration would allow us to reach a larger sample than personal interviews. While telephone administration is less expensive than in-person interviews, not all of the relevant sample will have access to telephones, and the distribution of this problem may not be random with regard to the dependent variable of interest - risk for medical care utilization. The technical consultants are interviewing public program administrators and those with additional experience surveying this population to determine the extent of the problem.

Negotiations are currently underway to identify eligible beneficiaries who will be available for cognitive testing. Once those arrangements are complete, the technical consultants will conduct cognitive testing. The results of this testing will be used to modify the survey instrument. This phase of survey development will be concluded with the analysis and reporting of cognitive testing results.

We intend to append the respondents' twelve months' previous claims and twelve months' subsequent claims to the survey results. With the resulting data set we can compare the predictive strength of the claims/encounter-based model and the survey based information. We can also test the relative significance of various items collected by the survey.

The survey is designed to be adequate for predictive resource use. If we find a variable through the survey that is highly predictive and unique, we will consider adding it to the eligibility determination. Once it is routinely collected through the eligibility process, it can be incorporated into the risk adjustment process.

Surveys for risk assessment compared with surveys for case management

This survey should not be confused with intake questionnaires designed for case management. Such questionnaires may be used by any of the plans on the universe of their enrollees to assist the plans in managing patient care. Although the process of surveys for risk assessment and questionnaires for case management may seem superficially similar, they differ in objective, (predicting financial burden vs. predicting need for specific services), measurement accuracy (description of groups vs. case identification of specific individuals), sampling strategy (sample vs. universe), and survey administration (independent outside agency vs. the plan).

A Comparison of Surveys for Risk Adjustment and Surveys for Case Management

	Survey for Risk Adjustment	Survey for Case Management
Purpose	predict total financial resource use	predict need for special services
Measurement accuracy	Sufficient to describe group characteristics	Specific enough to identify individuals
Sampling approach	Sample	Everyone
Survey administrator	Independent outside agency	Health plan or care provider
Need for consistency across groups	Critical	Each plan could tailor to its own systems and programs

8. Conclusion

Progress has been made in establishing a working relationship among risk adjustment decision makers and implementers. Data collection for model testing has begun. The next steps in the project are:

To complete the construction of a cost, utilization, diagnosis and eligibility data file for model testing leading to model selection.

Complete the cognitive interviews and finalize the risk survey instrument.

Continue to monitor and work with the Rate Setting Task Force and DHS staff to determine specific procedures for administration of the risk adjustment mechanisms.

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Attachment D

Minutes of the Public Programs Risk Adjustment Work Group

Public Programs Risk Adjustment Work Group
October 31, 1995
Minutes

The meeting was convened by Lynn Blewett of the Health Department at 9:00 am. The meeting was held at the Metro Square Building, 121 East Seventh Place, St. Paul.

In Attendance:
Members and Alternates:
Mark Hudson, UCare
Patti Warden, Allina
Diane Loffler (alternate for Tom Severson), Hennepin County
Debbie Chase, Hennepin County
Maureen O'Connell, Mid-MN Legal Assistance
Rolf Jacobson, Como Park Lutheran Church
Daniel Voight (alternate for Sandy Rasmussen), Fairview Healthcare Services
Margaret Amundson (alternate for Mary Tambornino), Hennepin County
Roberta Opheim, Ombudsman for MR/MH
Chuck Dustrud, Scott County Public Health
John Tomlin, Gillette Children's Hospital
Bob Power, HealthPartners
Stan Hill, Retired Actuary
Winston Stellner (alternate for Al Johnson), Metropolitan Health Plan
Mark Liebow, Mayo Clinic

Staff:
Gini Weslowski, MDH
Lynn Blewett, MDH
Paul Olson, DHS
Jason Wiley, DHS
Kathleen Schuler, DHS
David Knutson, Park-Nicollet

Following introductions of members and staff, Lynn Blewett, Director of the Health Economics Program of MDH provided an introduction and overview of the Public Programs Risk Adjustment Work Group (PPRAWG) responsibilities. Risk adjustment was first discussed in the context of health reform, as a necessary component of financial equalization among plans when there are both rate limitations (such as rate bands or community rating) and risk segmentation among plans. Initial discussions of risk adjustment in Minnesota centered around the private markets. The 1994 MinnesotaCare legislation created a Risk Adjustment Expert Advisory Panel and the Risk Adjustment Association. MDH and the Department of Commerce were required to report on risk adjustment to the legislature. The 1995 MinnesotaCare legislation assigned the responsibility for public sector risk adjustment to MDH and DHS, and created the Public Programs Risk Adjustment Work Group (PPRAWG) to serve as an advisory group to MDH and DHS regarding this issue. She also mentioned several different activities which need to be coordinated with the work of the PPRAWG. One is the private

sector Risk Adjustment Association, which is working to develop risk adjustment in the individual and small group markets. The second is the DHS Rate-setting Task Force, which is charged to explore different methods of rate setting for public programs, which must incorporate the public programs risk adjustment mechanism. The charge of the PPRAWG is to provide recommendations to MDH and DHS regarding factors that should be included in a public programs risk adjustment system. The Commissioners are required to provide recommendations for any necessary legislative initiatives to the legislature by January 15, 1996.

Gini Weslowski of MDH provided a presentation on the purpose and process of risk adjustment. The two stages in the process include risk assessment and risk adjustment. Risk assessment is the process for determining the risk level of each plan's enrolled population. Risk adjustment is the process of transferring money so that plans with more costly enrollees receive higher payments. *Risk in this context is the risk of high health care expenditures.* In public programs, risk adjustment is needed because individual patients can choose among health plans and sick people tend to choose different plans than healthy people choose. The legislation requires that we look at age, gender, specific conditions, and other factors related to poverty, cultural or language barriers, and other special needs of the public program population.

In public programs, risk adjustment is related to rate setting, because both rate setting and risk adjustment attempt to compensate plans fairly for the population they enroll. Typically, rate setting does not adjust for that health status or diagnosis mix of a plan's enrolled population. Risk adjustment allows for the introduction of information on the health status of, specific conditions experienced by, and other characteristics of the population which are related to higher than average health care expenditures. Key points are that risk adjustment is a research-based endeavor, it is a long-term project, the PPRAWG is advisory to MDH/DHS and the legislature ultimately decides what is implemented, and there are inherent tradeoffs in risk adjustment, such as a tradeoff between accuracy of the method versus the data intensivity of the processes.

David Knutson, of the Park Nicollet Medical Foundation, provided an overview of approaches to risk assessment. He is under contract with MDH for assistance with the public programs risk adjustment system, and also chairs the private-sector Risk Adjustment Association's Methods Committee. He separated the variation in medical expenses into systematic (predictable) and random (unpredictable) variation. Systematic variation arises from characteristics of patients (such as having diabetes) where future costs can be predicted. Random variation would arise from conditions such as trauma, which cannot be predicted in advance. Risk adjustment is intended, as a research-driven endeavor, to compensate plans for higher-than-average systematic health care expenditures.

Several models which have been considered were reviewed. A promising model, build around Ambulatory Care Groups (ACGs) and Diagnostic Cost Groups (DCGs) was considered, and will be studied further for possible future use, but data requirements may make it difficult to implement in the near future. An alternative plan, based on a system developed for the Health Insurance Plan of California (HIPC) has been selected for adaptation in Minnesota. This

model uses age and gender, and a list of specific high-cost conditions to give each plan a score which indicates how that plans population relates to the other plans in the market. He mentioned several key public programs issues which will need to be addressed, including the transient nature of enrollment in public programs, the problem of dual eligibles,

Paul Olson of DHS presented an overview of the DHS rate setting process and the links to risk adjustment. Federal health reform will mean large budget cuts at DHS, and this will necessitate moving more public clients into managed care faster. He indicated that historically, rates for managed care plans have been set in a political environment. DHS is interested in moving to a more competitive model, where health plans bid, rather than DHS setting the rates. DHS is currently trying to develop a model for competitive bidding which retains consumer choice, but provides incentives to health plans to be the low bidder. Risk adjustment will be particularly important as the disabled and other groups are moved into managed care.

Discussion by the workgroup raised several issues. One member pointed out that the Buyers Health Care Action Group (BHCAG) was developing a risk adjustment mechanism for use with the plans they contract with. This system will be based on the ACG model, and they are requiring plans which want to participate to provide the necessary data. If the data is available from those plans, couldn't DHS make a similar requirement and use a similar method? One health plan representative indicated that the data are available from most plans to do an ACG type model. This would allow us to have a better, more comprehensive risk adjustment system. Another member raised the possibility that some small plans may not be able to participate if this was a requirement, another member indicated that those small plans have typically not participated in public program managed care anyway.

One member raised the issue of gaming, and suggested that we consider how coding practices might be affected by a risk adjustment system. Also, there is still considerable variation within an ICD-9 code, and plans could opt to always do the low cost treatment to save money. Another member suggested that we consider approaching the Health Education and Research Foundation (HERF) to use some of their data. Another member raised the issue of spillover costs. If health plans don't cover certain services, there may be increases in costs associated with law enforcement, or social services. The end result could be higher costs for the state and/or counties.

The chief task for the work group will be to suggest factors which should be considered for the risk assessment model. At the next meeting, members will be asked to brainstorm about what characteristics of public program populations ought to be tested for possible inclusion in the risk adjustment model. Some early suggestions have been poverty, translation needs, transportation needs. This brainstorming should not be constrained at this point by what information is available, but rather what would we like to see examined as a possible predictor of greater health care costs. After a list of possible factors is assembled, staff will begin to examine availability of data for each factor. For those where there is a way of collecting data, testing can be conducted as to how well that factor actually predicts costs.

Members were asked to examine the list of three possible dates for PPRAWG meetings and to indicate to staff which of the days they are available. Tentative dates under consideration are November 28, December 11, and January 8. The meeting was adjourned at 12 noon.

Public Programs Risk Adjustment Work Group
December 11, 1995
MDH- Metro Square Building, St. Paul
Minutes

In Attendance:
Members and Alternates:
Mark Hudson, UCare
Patti Warden, Allina
Mary Tambornino, Hennepin County
Rolf Jacobson, Como Park Lutheran Church
Sandy Rasmussen, Fairview Healthcare Services
Paul Doyle, (alternate for Roberta Opheim), Ombudsman for MH/MR
Chuck Dustrud, Scott County Public Health
John Tomlin, Gillette Children's Hospital
Bob Power, HealthPartners
Stan Hill, Retired Actuary
Gayle Hellin, City of Bloomington
Steve Bjorum, First Plan
Maureen O'Connell, Legal Services
Lois McCarron, (alternate for Marilyn Krueger), AMC- St. Louis County

Staff and Guests:
Gini Weslowski, MDH
Lynn Blewett, MDH
Jason Wiley, DHS
Kathleen Schuler, DHS
David Knutson, Park-Nicollet
Jinnet Fowles, Park-Nicollet
Tiffany Radcliff, MDH
Greg Gifford, MDH

The meeting was convened at 9:00am. Minutes from the meeting of October 31 were reviewed and approved. Staff gave a brief report on the visit from Dr. Richard Kronick on November 28, and copies of his overheads and article were distributed.

The main topic of the meeting was for the group to brainstorm to come up with a list of factors which may be predictive of health care expenditures for the public program population. The factors will then be studied to see if data is available. For those factors where data is available, research will be done to see if they are in fact predictive of health care expenditures.

Closely linked with this topic was a review and comment on a draft health status survey

instrument developed by Dave Knutson and Jinnet Fowles, under contract with MDH. The purpose of this survey is to validate the claims/administrative data set, and to uncover other factors unavailable from claims data which may be predictive of health care expenditures. Dave Knutson provided an overview of the survey, and indicated that it was not a needs assessment tool, but rather a screening device. He pointed out that a "needs assessment" is an in-depth assessment, the purpose of which is to identify the services needed by individuals, whereas a "screening device" is a broader survey, the purpose of which is to identify general resource needs for population groups. The questions included are based on or directly taken from proven instruments. The work group commented that phone surveys for this population are not always effective, and recommended that we consult with the Data Institute to better understand problems they experienced in surveying this population.

The work group decided that the best way to approach these two issues would be to utilize the structure of the survey and go through each type of data (ie, demographics, functional status, etc) and brainstorm on additional factors which might be considered, either as additions to the survey which could be found through other data sources. The group decided not to spend time discussing where each item might best be found, since staff can do some groundwork on identifying sources at a later date.

The following is a list of the elements discussed during this process:

DEMOGRAPHICS
eligibility, what programs (including cash assistance, other public assistance)
length of eligibility
dual eligibility (alternate coverage such as workers comp, no fault auto, Medicare buy-in, others)
race
cultural group
language
sexual orientation
spend-down status
employment status (including sheltered workshop vs other employment)
education level
how long disabled
income
parents/grandparents eligible
# of sexual partners
geographic factors (time to providers)
access to transportation
availability of personal transportation
diagnoses with unusual cost "bumps."
were any of your children born premature

LIVING ARRANGEMENTS
zip code
institutionalized (type of institution)
homeless
incarceration (current, historic)
apartment vs house
are you head of household
how many other adults in household, how many children in household
for children, marital status of parent
do you have non-resident children, where are they (shelter, foster care, institution)
are children not living with you also covered by public program

HEALTH STATUS
blind/deaf
MR status
height/weight/age ratios
are you a happy person

PERFORMING TASKS AND ACTIVITIES
Self-care activities
nutrition- how many meals do you prepare (or are prepared?) in the home each day
use of meals on wheels
sedentary lifestyle
tasks for kids
difficulties reading/interpreting information, following directions

HEALTHCARE AIDS AND RESOURCES
barriers to access
    if you needed to go to the Drs and didn't go, why not
    have you experienced a barrier to care
use of PCAs
unpaid support persons available
pharmaceutical use
ventilator dependency
IV/nutritional drugs (do you need help with these?)
for disabled kids, are they in school, how long?
special education/Head Start eligibility
how many ER visits for kids/ adults
immunizations

CONDITION LIST
are these conditions "under control?"
add "other" condition
break out subgroups of mental illness (serious/persistent)
chemical dependency- need more than Cage
accident (alcohol/drug related?, cause? motorcycle, snowmobile)

add more developmental disabilities
add from Kronick list
back pain
separate learning disabilities from attention deficit disorders
brain injuries
prematurity
other items from Risk Assessment Form

The work group also discussed the importance of evaluating the incentives which would be created by including a factor in the risk adjustment system. For example, although lack of prenatal care is likely a predictor of higher than average health care costs, if health plans were paid more for a pregnant woman who does not receive prenatal care than one who does, a perverse incentive would be created which would encourage plans to avoid providing prenatal care. Many preventive care factors have similar problems. Also, groups which have experienced barriers to care (such as some cultural or racial groups) may have lower health care costs because of those barriers, and may have equivalent or greater "need" for service. Clearly, this should not be reflected in the risk adjustment system. Because of issues such as these, the research process for evaluating factors to actually be used will include evaluation of the factors ability to predict expenditure use as well as ability of the factor to support the appropriate incentives desired by the health care system.

The brainstorming list above will be organized into a table, which will indicate how each factor might be measured, if data is available and from what source, and any special concerns related to that factor. This table will be discussed at the January meeting of the work group.

Public Programs Risk Adjustment Work Group
January 8, 1996
MDH- Metro Square Building, St. Paul
Minutes

In Attendance:
Members and Alternates:
Mark Hudson, UCare
Patti Warden, Allina
Mary Tambornino, Hennepin County
Rolf Jacobson, Como Park Lutheran Church
Dave Voigt, (alternate for Sandra Rasmussen) Fairview Healthcare Services
Roberta Opheim, Ombudsman for MH/MR
Chuck Dustrud, Scott County Public Health
Bob Power, HealthPartners
Stan Hill, Retired Actuary
Gayle Hellin, City of Bloomington
Maureen O'Connell, Legal Services
Marilyn Krueger, AMC- St. Louis County
Debbie Chase, Hennepin County
Mark Leibow, Mayo Clinic
Tom Severson, Hennepin County

Staff and Guests:
Gini Weslowski, MDH
Jason Wiley, DHS
Kathleen Schuler, DHS
David Knutson, Park-Nicollet
Jinnet Fowles, Park-Nicollet
Greg Gifford, MDH
Monica Schultz, MDH
Louise Anderson, DHS
Harry Sutton, Allianz Life
Sarah Thorson, MDH
Jan Jernell, MDH
Anne Kinney, MDH
John Hurley, MDH

The meeting was convened at 9:00am. Minutes from the meeting of December 11 were reviewed and approved.

Patti Warden of Allina distributed copies of a report "Medicaid Managed Care Study: Summary of Results," conducted by the Medica Foundation in 1992. Its purpose was to identify barriers that might exist for the Medicaid population. The report was used as a basis

for programmatic action on the part of Medica and other plans. She indicated that she thought that the report was not directly relevant for our purposes, but it may provide some background on the needs of Medicaid populations.

The work group then turned to a discussion of the factors list created at the last work group meeting and reviewed the chart of these factors prepared by staff.

Specific comments on the factors are listed briefly below:

Demographics
--Language should be added to the Demographics section, specifically focusing on whether or not the person has a working knowledge of English.
-- Employment status should be included in the survey to validate employment information available through eligibility data.
-- It was noted that "other coverage" was unreliable on the claims data, and may also be unreliable if asked on a survey. Perhaps Medicare coverage would be the only other coverage measurable.
-- Cultural groups- United Way has a survey question designed to get at cultural information. Staff will follow up in getting that information.
-- Time to provider- is a very hard question to ask well. Staff will check with Data Institute as to how they worded a question on time to provider.
-- For mothers- any of your children born premature- should be kept in survey.

Living Arrangements
-- Information on homelessness is not available through eligibility data. Keep on survey only.
-- Discussion of need for incarceration data. Data privacy would likely prohibit obtaining prisoner data for risk adjustment. We probably could not justify asking for release.
-- Apartment vs. House- Discussion centered on whether or not this is important. Perhaps for the elderly, predicts need for waivered services. Staff will investigate. It was suggested that we could use "Section 8" housing as a proxy for income. Some members felt that this was undesirable as it perpetuates misconceptions about people in such housing.
-- Drop the question about the marital status of the child's parents, and the questions about are you head of the household.

Health Status
-- Keep question on height/weight/age ratio in survey. It is highly predictive.
-- Replace "are you a happy person" with a better question about depression

Performing Tasks and Activities
-- Replace "number of meals prepared in the home" with "do you eat a balanced diet" or "do you generally try to follow nutritional guidelines."
-- Tasks for kids: need to develop a list

Health Care Aids and Resources
-- Pharmaceuticals: are very predictive of health care costs. We need a question about how well the person takes what is prescribed in survey.

-- Ventilator dependence- is too much an outlier. This, and perhaps other highest cost situations should be considered for possible carve-out or separate rate system.
-- Remove the two questions "For disabled kids- are they in school" and "Special ed/headstart eligibility and participation" and look for another question which gets are severity better. It was also proposed that Headstart and Medical Assistance eligibility criteria may be identical. If so, assessing both would be unnecessary.
-- # of ER visits may be predictive but may create difficult incentives.
-- Drop "are these conditions under control and replace with "how serious is this condition."
-- Need to add questions that get at risk and adolescence (drop-out, group sports, chemical dependency treatments). We will need to look at how these things are currently paid, since it was pointed out that these costs are being absorbed by community-based facilities (eg., school-based clinics).

Conditions List
-- Back pain- is this important enough to keep? Perhaps focus on history of back pain.
-- Focus on items from the prenatal "risk assessment form"may be misguided,since pregnancy is a negative predictor of future costs to mother in the following year.

A number of additional comments were made by members. One member commented that there was too much focus on the survey, and that surveys were very difficult to do on this population. He commented on the trouble that the Data Institute had with the satisfaction surveys. Staff indicated that the process of conducting the surveys would be examined carefully, to be sure that an adequate representation of public clients could be achieved.

Another member recommended that we explore the availability of other data sets, such as data collected at the county level, which might be a source of information. County representatives indicated that there was not much data collected by the county which was not passed on to DHS, except for some screening data on special populations. Staff will explore this more fully.

The staff indicated that it will take an initial attempt at prioritizing the factors that remain as possible items to be added to the survey. It is likely that the number of factors identified to date is greater than the number that can be added to the survey and still keep the survey to a manageable length. This prioritization list will be discussed by the work group at the next meeting.

The work group then reviewed the draft report to the legislature and made several recommendations. There should be a greater discussion of what has been done by others on risk adjustment. There should be an emphasis on the data component. Health plans commented that they have encounter data necessary for risk adjustment and that test tapes are going to DHS this month. Data should not be seen as an obstacle. The report should reinforce the importance of prevention, by assuring that the risk adjustment system will be designed so that it does not introduce incentives against preventive care, and the report should also identify areas where there is a need for other activities to improve prevention services. The concept of "demand management" should also be considered. Inclusion of the newest counties in PMAP should be referenced.

The group will meet again in March, once staff has had a chance to revise the survey and to begin working with the public programs data.

The meeting was adjourned at 12 noon.

Attachment E

Factors Which May be Predictive of Risk of Future Health Care Costs

Factors Which May Be Predictive of Health Care Costs for Public Program Recipients

Revised 1/10/96

Factor	Source: Claims/ eligibility	Source: Survey	Source: Other	Notes	Recommendations KC-Keep-claims/eligibility KS- Keep-survey KB-Keep-both DU-Drop-unreliable or inappropriate DNA-Drop-not available DL-Drop-lower importance
DEMOGRAPHICS					
Age, gender	yes	yes			KB
eligibility length programs	 yes yes	 ? yes			 KC KB
Other coverage Medicare, workers comp, others	yes	?			KC
Race Cultural group Language	yes	yes yes yes		Incentives?	KC
Sexual orientation # of sexual partners		?		Reliability? Privacy?	DU
Spend-down status	yes				KC

Employment status	yes				KB
Education level	yes				KC
How long disabled	yes?	yes			KB
Income	yes				KC
Parents/grandparents eligible	? would need IDs to cross reference	?		Too difficult to cross reference IDs	DU
time to provider		yes		See how data inst. worded question	KS
Access to public/other transportation		yes			KS
Availability of private transportation		yes			KS
For mothers: any of your children premature?		yes			KS
LIVING ARRANGEMENTS					
zip code	yes				KC
Institutionalized type of inst.	yes	yes			KB
homeless		yes			KS
incarceration current historic	yes?	yes?		When would MA/etc pay for prisone care? Reliability?	DL

Apartment vs house	yes?	yes		Not clear what this would measure	DL
Are you head of household	yes?	yes		Perpetuates misperceptions	DL
# of adults in household	yes				KC
# of children in household	yes				KC
for children, marital status of parents	yes?	yes		Perpetuates misperceptions	DL
non-resident children where are they are they covered	yes yes? Yes	?		Not clear what this would tell us	DL
HEALTH STATUS					
Blind/deaf	yes	yes			KB
Mental retardation status	yes	yes			KB
Height/weight/age ratio		?			KS
Depression question		yes			KS
PERFORMING TASKS AND ACTIVITIES					
Self-care activities		yes			KS
Do you eat a balanced diet? Do you try to follow nutritional guidelines?		yes yes			KS
Use of meals on wheels		yes		Is this a consistent measure?	DU

Sedentary lifestyle		?		How defined?	DNA
Tasks for kids		yes		What tasks?	
Difficulties reading, interpreting, following directions		yes			KS
HEALTH CARE AIDS AND RESOURCES					
If you needed to go to the doctors and didn't, why not?		Yes			KS
Have you experienced a barrier to getting care		yes			KS
Use of patient care attendants	yes?	yes			KB
Avail. Of unpaid support persons		yes			KS
Pharmacuetical use	yes				KC
Do you take the medications you are prescribed in the correct dosages?		yes			KS
Ventilator dependent	yes	yes		should be handled differently	DU
IV/nutritional drugs do you need help		yes			KS
For disabled kids, are they in school		yes		Need to replace with better question	DU
Special ed/ HeadStart eligibility, participation		yes		Need question on severity	DU
# of ER visits (children &adults)	yes	yes			KC

Immunizations	yes?	yes		Not appropriate for risk adjustment	DU
CONDITIONS LIST					
Are these conditions serious?		yes			KS
Add an "other"	yes?	yes			KB
Break out mental illness (serious/persistent)	yes	yes			KB
Chemical dependency	?	Cage		What other?	
Accident Alcohol, drug related? Cause	?	yes			KS
Add more developmental disabilities	yes	yes?		For survey, what ones?	KB
Add conditions from Kronick list				Which ones?	KB
History of chronic back pain		yes			KS
Separate learning disabilities from attention deficit disorder	yes	yes			KB
Brain injuries	yes	yes			KB
prematurity	yes	yes			KB
Other items from Risk Assessment Form	yes?	yes?		Which ones?	KB

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