PROVIDER PEER GROUPING RECOMMENDATIONS

10/23/2009

Provider Peer Grouping Advisory Group

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EXECUTIVE SUMMARY

- The Provider Peer Grouping Advisory Group was appointed by the Commissioner of Health to provide advice and recommendations to the Commissioner on how to appropriately compare providers on a combined measure of risk-adjusted cost and quality for a provider's patient population as a whole, and separately for select specific health conditions. The Advisory Group met nine times over a period of four months and was assisted by a Commissioner of Health appointed Technical Panel who advised and informed the Advisory Group regarding more technical and practical methodological issues.

- The Advisory Group recommends the following six specific conditions for peer grouping in 2010: diabetes, coronary artery disease, pneumonia, asthma, congestive heart failure, and total knee replacement. These conditions were selected because they impact a cross section of patient and payer populations, they have high prevalence rates, they have high variability in cost among providers, they address both chronic and acute conditions, and include a major hospital component and/or a major specialty physician component.

- The Advisory Group defines Total Care as the representation of all covered medical services for all medical conditions incurred by a covered member over a defined period of time (usually one year). Members who do not receive any care during the defined time period are also included in the Total Care measure. Total Care includes all covered services including physician, hospital, ancillary, and pharmacy for Minnesota residents covered under Medicare, commercial insurance or public programs.

- The Advisory Group recommends that the final representation of "value" for the purposes of provider peer comparison not be limited to a single number but rather be a two dimensional representation measuring cost and quality on separate axes. This would allow consumers to evaluate cost and quality at the same time as well as to evaluate each component independently. The Advisory Group had its greatest struggles discussing how cost and quality should be combined into a single value measure due to the majority of the members' disagreement with the principle of the task. The Advisory Group offers recommended attributes for a methodology to translate value into a single score (*see section VI. COMBINING COST & QUALITY RECOMMENDATIONS*), but prefers displaying the components of value separately and letting users determine where value lays for them.

- The Advisory Group does not intend for new quality measures to be developed and collected specifically for the sole purpose of provider peer grouping. The Advisory Group recommends using quality measures that providers are already collecting and submitting through other initiatives or are available through the encounter database. For a complete list of recommended quality measures for Condition Specific (*23 measures*) and Total Care (*32 measures for physician, 56 measures for hospital*), please reference the appropriate sections in the full report.

- The Advisory Group reviewed alternatives and made recommendations on the below nine core methodological issues as outlined in Minnesota Statutes 62U.04.

1. ISSUE: *Provider attribution of costs and quality*

   RECOMMENDATION: Utilize an attribution methodology that supports more credible attribution rather than pursuing a goal to attribute as many episodes as possible. Total Care (not including non-users) and Condition Specific patients for whom there is no clear provider managing their care will be excluded from the peer grouping analysis.

   Assignment of patients to providers is a critical step in provider peer grouping since the patients are the basis upon which providers are measured. Based on providers' and health plans' experience with attribution, emphasizing more credible attribution, even if it is at the expense of excluding a portion of patients, is recommended to help with provider acceptance, understanding, and data credibility of the peer grouping process.

2. ISSUE: *Appropriate adjustment for outlier or catastrophic cases*

   RECOMMENDATION:
   - Set outlier thresholds specific to the population size of clinics based on actual claims data;
   - Remove low outliers for Condition Specific but maintain low outliers for Total Care;
   - Truncate high outliers for all providers and apply any necessary additional actuarial corrections for small clinics or groups.

   Provider peer grouping is intended to reflect the average value a provider presents to his/her patient population over a period of time. Recognizing that individual patients can be above or below a provider's norms and can sometimes unduly influence a provider's average value, it is appropriate for adjustments to be made to account for these outliers. Adjustments for outliers is a common statistical technique that should be applied and beyond the guidelines recommended, the Advisory Group advises expert statisticians review the actual data to make appropriate specific recommendations.

3. ISSUE: *Appropriate risk adjustment to reflect differences in the demographics and health status across provider patient populations, using generally accepted and transparent risk adjustment methodologies*

   RECOMMENDATION:

   - Utilize a commercial risk adjustment and grouper software package accepted by the community such as Episode Treatment Groups (ETGs) for Condition Specific and Adjusted Clinical Groups (ACGs) for Total Care.
   - Apply two levels of risk adjustment for Condition Specific---the risk stratification that is part of the selected episode software, and a second level of risk adjustment, such as ACGs that identifies co-morbidities in greater detail.

- Selected risk adjustment and grouper software vendor must be willing to make software algorithms and logic transparent to all interested parties.

4. ISSUE: *Specific types of providers that should be included in the calculation*

   RECOMMENDATION: The provider type to be measured for provider peer grouping is specific to each condition. The definition for primary care should include any physician designated as a patient's primary care physician, regardless of specialty designation.

• Diabetes	Primary Care Endocrinologist
• Pneumonia	Hospital
• Heart Failure	Primary Care Cardiology
• Total Knee Replace	(by surgeon, by hospital)
• Coronary Artery	Primary Care Cardiology
• Asthma	Primary Care Pediatrician Pulmonologist Allergist
• Total Care	Primary Care Hospital

5. ISSUE: *Specific types of services that should be included in the calculation*

   RECOMMENDATION: Include all covered services, including pharmacy, which are submitted to the encounter database for Minnesota residents only. For Condition Specific peer grouping, episodes with a hospital admission will attribute all hospital services to the measured clinic or physician.

6. ISSUE: APPROPRIATE ADJUSTMENT FOR VARIATION IN PAYMENT RATES

   RECOMMENDATION: Calculate both actual paid cost (allowed amounts owed by both the payer and the patient) and cost using a standardized unit price. Peer grouping using actual cost will reflect a provider's variation due to resource use and payment rate. Peer grouping using standardized prices will reflect a provider's variation due to resource use only.

7. ISSUE: *Appropriate provider level for analysis*

   RECOMMENDATION: Peer grouping should occur at the clinic site level. When valid data becomes available for a significant number of surgeons, peer grouping should occur at the individual surgeon level for Condition Specific surgical procedures. The Advisory Group recommends peer grouping at the medical group level only if clinic site peer grouping is not feasible. Hospital peer grouping should occur at the individual hospital level rather than at the hospital system level.

   Provider peer grouping will be limited by the data submitted to the encounter database. Currently, providers do not consistently submit data at a clinic level. In order to enable consistent clinic level reporting, the State may need to mandate appropriate clinic level reporting requirements. As peer grouping evolves, the Advisory Group also recommends health care systems be included as a unit of measure in order to measure a system's overall value in providing coordinated physician, hospital, and pharmacy services.

8. ISSUE: *Payer mix adjustments, including variation across providers in the percentage of revenue received from government programs*

   RECOMMENDATION: Peer grouping should include comparison by specific payer categories (Medicare, Minnesota Health Care Programs, and Commercial) and comparison where each provider's payer mix is normalized to a standard payer mix, but not necessarily report both for varied audiences.

9. ISSUE: *Other factors that the commissioner determines are needed to ensure validity and comparability of the analysis.*

   RECOMMENDATION:

   - Reconsider representation of "value" as a one dimensional score when a two dimensional display of cost versus quality can provide more comparative information.
   - Mandated timeline to produce Provider Peer Grouping results is aggressive. Validity of data should not be compromised in order to meet deadlines.
   - Final methodology should be informed by the actual data and modified to address any issues that materialize through analysis.
   - Final methodology, including analysis performed by an external vendor or software, should be as transparent as possible to all interested parties.

   - Quality measures should be expanded to refocus on functional outcomes and include a more macro view of health outcomes on the impact to society, such as percent in decreased workers' compensation costs and regained productivity.
   - Peer grouping methodology should incorporate new advancements and technology that emerge over time as peer grouping evolves and improves.
   - MDH should explore and encourage additional sources of data to be used in peer grouping beyond those that are currently available.

- The Advisory Group also discussed the type and method of reporting potential audience groups may need in order to embrace the use of a provider peer grouping tool.

- The Advisory Group made the following recommendations for future phases of Provider Peer Grouping:
  - The Commissioner should continue to seek input, either through an Advisory Group or other means, to ensure provider peer grouping evolves in a manner that provides value to stakeholders. The Advisory Group recommends the Commissioner review initial peer grouping results with stakeholders, particularly providers, beginning in June 2010 and prior to September, 2010 when the results are first published.

  - Over the next two years, provider peer grouping should place focus on chronic disease care, depression, maternity care, preventive services, and patient experience (scheduled to be available in 2011) as well as develop quality measures that address children, elders, and persons with disabilities.
  - Quality measurement gaps should be inventoried immediately in order to begin data collection as soon as possible. Some identified quality measurement needs include measures of functional outcomes, measures of health rather than illness, measures with evidence based links to positive outcomes, measures of patient satisfaction and access, and measures to evaluate improvement trends over a longer time period.
  - Provider peer grouping activities should make efforts to create synergies with other health policy and reform initiatives that may be occurring locally, regionally, or nationally. Efforts should be integrated across communities and institutions whenever possible in order to maximize resources dedicated toward health improvement.

- Finally, the Advisory Group strongly recommends the Commissioner and the Legislature expand the encounter and pricing database for uses beyond provider peer grouping. During the Advisory Group's discussions, it became apparent how valuable and informative the database could be in helping Minnesota better understand its population's health care use. Minnesota will now possess a unique source of information that can help inform multiple State departments, agencies, researchers, and enable the Legislature make better policy decisions and help Minnesota achieve its Health Reform goals, such as evaluating efficacy of Health Care Homes over time and understanding geographic health and health care cost differences for the entire state.

  The Advisory Group encourages the Commissioner and Legislature to support both provider peer grouping and the encounter and pricing database with time, staff, and funding resources. Creation of the database in particular, places Minnesota on the brink of a wealth of possibilities and insight to truly impact the health of its citizens. The ability to harvest and use the information, however, will take time and patience to allow the database to become populated with multiple years of data, to allow providers and payers to learn how to submit data more completely and consistently, and to allow patients time to learn how to become better health care consumers. It is critical that this effort not be abandoned midstream.

I. INTRODUCTION

The 2008 Health Reform law passed by the Minnesota Legislature is a unique, nation-leading set of reforms that work together in four broad areas: population health, market transparency and enhanced information, payment reform and consumer engagement. Creating a Provider Peer Grouping system is one of the initiatives the State is undertaking to improve market transparency and enhanced information. A system to publicly compare provider performance on dimensions of cost and quality will give Minnesotans better access to information that will empower them to make more informed, value based, health care decisions.

II. BACKGROUND

Minnesota Statutes 62U.04 requires the Commissioner of Health to develop a system comparing health care providers on a composite measure of risk-adjusted cost and quality. Specifically, the law requires the Commissioner to establish a methodology for making these comparisons by January 1, 2010; use the methodology and share results with providers in June 2010; and publicly report the results of this analysis at least annually beginning in September 2010. Beginning in January 2011, the State Employee Group Insurance Program, local units of government, and health plans are required to use the provider peer grouping information to create incentives for enrollees to use higher quality, lower cost care. The peer grouping system must include a combined measure of cost and quality for a provider's patient population as a whole (*Total Care*), and separately for select specific health conditions (*Condition Specific*).

Minnesota Statutes, 62U.04, subd. 4 and 5 require the Minnesota Department of Health (MDH) to collect de-identified encounter and pricing data from health plan companies and third-party administrators beginning July 1, 2009 and every six months thereafter, for the purpose of developing the provider peer grouping system. Encounter data are claims and enrollment data related to the utilization of health care services by, and the provision of health care services to, individual patients. Pricing data are the amount paid by a data submitter to a provider on a claim plus any amount owed by the covered individual including prepayment, deductible, co-insurance, or co-payment. The earliest claim date of service that will be available from any provider is January 1, 2008.

The encounter and pricing data collected will be the sole source of cost and utilization data for both Total Care and Condition Specific provider peer grouping. The collection of this data will create a unique multi-payer database of all services submitted via medical claims, including physician, hospital, and pharmacy for Minnesota residents. Some quality measurement data will be reported directly from physician clinics and hospitals under another health reform initiative and some will be obtained from claims data.

III. PROCESS

The Minnesota Department of Health created a Provider Peer Grouping Advisory Group composed of stakeholders representing health care providers, health plans, consumers, employers, state government and other key perspectives. MDH identified several groups and associations representing stakeholders and asked them to provide a specified number of individuals to represent their constituents on the Advisory Group. The final sixteen members of the Advisory Group had varied backgrounds but all possessed some experience and understanding of health care payment and the need for greater information to make value based health care decisions. *(See Appendix for list of Stakeholder Groups and their appointed Advisory Group Members.)*

The goal of the Advisory Group was to develop a set of recommendations to be submitted to the Commissioner by October 15, 2009 regarding a methodology to peer group providers and to specifically address the issues below as stated in Minnesota Statutes 62U.04.

MINNESOTA STATUTES 2008
62U.04 PAYMENT REFORM; HEALTH CARE COSTS; QUALITY OUTCOMES

Subd. 2. Calculation of health care costs and quality. The commissioner of health shall develop a uniform method of calculating providers' relative cost of care, defined as a measure of health care spending including resource use and unit prices, and relative quality of care. In developing this method, the commissioner must address the following issues:

(1) provider attribution of costs and quality;

(2) appropriate adjustment for outlier or catastrophic cases;

(3) appropriate risk adjustment to reflect differences in the demographics and health status across provider patient populations, using generally accepted and transparent risk adjustment methodologies;

(4) specific types of providers that should be included in the calculation;

(5) specific types of services that should be included in the calculation;

(6) appropriate adjustment for variation in payment rates;

(7) the appropriate provider level for analysis;

(8) payer mix adjustments, including variation across providers in the percentage of revenue received from government programs; and

(9) other factors that the commissioner determines are needed to ensure validity and comparability of the analysis.

The Advisory Group began meeting in June, 2009 and established a schedule to meet nine times throughout the summer to complete the task. In order to complete the goal set before the Advisory Group, the topics were organized and laid out in a “roadmap” to clearly guide the discussion process. The Advisory Group was directed to provide recommendations for Provider Peer Grouping methodologies for both a set of specific conditions and for total care. The original plan was to discuss each of the topics as it pertained to Condition Specific and Total Care at the same meeting, assuming

this would allow all issues related to a topic to be thoroughly discussed and recommendations identified. *(See Appendix for Revised Roadmap)*

It quickly became clear that mixing issues related to Condition Specific and Total Care was confusing and hindering the discussion. The concept of Condition Specific was more familiar to the Advisory Group and easier to fully understand than the concept of Total Care. The "roadmap" was revised to discuss all issues related to Condition Specific together and then to repeat the discussion again but in the context of Total Care. This "remapping" resulted in more fruitful and cohesive discussions since it allowed the momentum of ideas and thoughts built around a single context (Condition Specific or Total Care) to occur.

Based on the Advisory Group's experience, it may be useful to separate the communication of results on specific conditions from the results of total care to minimize confusion.

The Minnesota Department of Health also created a thirteen member Technical Panel composed of experts who focused on the many significant technical methodological and practical considerations associated with comparing providers. Advisory Group and Technical Panel members reviewed background papers prepared for each topic by MDH staff prior to the Advisory Group's consideration of topics and the Technical Panel responded to questions posed by the Advisory Group. The Technical Panel's role was to support the work of the Advisory Group and not to create an independent set of methodological recommendations. *(See Appendix for list of Technical Group Membership.)*

IV. CONDITION SPECIFIC RECOMMENDATIONS

SPECIFIC CONDITIONS SELECTED FOR PHASE 1 PROVIDER PEER GROUPING

Recommended Condition for Peer Grouping in	***Reasons Supporting Recommendation (not inclusive)***
1. Diabetes	High prevalence rate, well established quality measures in community, identified condition under Minnesota Statewide Quality Reporting and Measurement System (SQRMS) and the Ambulatory Care Quality Alliance (AQA)
2. Coronary Artery Disease	High prevalence rate, well established quality measures in community, identified condition under SQRMS and AQA
3. Pneumonia	Primarily an acute hospital focused condition, identified condition under SQRMS and Centers for Medicare & Medicaid Services
4. Total Knee Replacement	Primarily an orthopedic specialty focused condition and includes a hospital component as part of the condition, impacts commercially insured population, high variability in cost
5. Asthma	High prevalence rate, well established quality measures in community, impacts seniors, adults, and children, identified condition under SQRMS and AQA
6. Congestive Heart Failure	Identified condition under SQRMS and AQA, high cost condition
Recommended High Priority Conditions for Peer Grouping after 2010	
1. Maternity	High prevalence condition for women and children across all insured populations but currently no established quality metrics
2. Depression	High prevalence and impact to total population health; wait for further implementation of DIAMOND Project and availability of measure through MN Community Measurement.

With the creation of a multi payer claims database, the availability of cost data will not be a barrier to peer grouping based on a combined cost and quality measure. Consistently collected quality data representing all providers are much more challenging to obtain. To identify recommended specific conditions to peer group in 2010, the Advisory Group recognized the benefits of building on the progress of other quality projects, such as the Minnesota Statewide Quality Reporting and Measurement System (SQRMS) and the Ambulatory Care Quality Alliance (AQA). The Advisory Group looked to these projects as a starting point to identify specific conditions that already have quality measurement endeavors in place.

The Advisory Group discussed whether conditions recommended for peer grouping need to be the same as those identified for the Baskets of Care initiative that is also part of the 2008 Health Care Reform legislation. Some of the final conditions recommended by the Advisory Group coincide with those identified for Baskets of Care but the Advisory Group and MDH staff agreed that the two initiatives have differing goals and do not need to be the same. While the Baskets of Care and Provider Peer Grouping initiatives are both intended to encourage greater competition among providers on both

quality and cost, Baskets of Care achieves this goal through changing how providers contract and are reimbursed while Provider Peer Grouping achieves this goal through improved information sharing and data transparency.

In determining which conditions should be recommended, the Advisory Group considered many criteria including, but not limited to, the following:

- Recommending a reasonably small number of conditions (three to six) to implement in the initial year of peer grouping;
- Recommending conditions that impact a cross section of patient and payer populations, such as Medicare insured, commercially insured, women and children;
- Recommending conditions that have high prevalence rates;
- Recommending conditions that include a major hospital component to allow for the comparison of hospital performance measures;
- Recommending conditions that include a major specialty physician component to allow for the comparison of specialist performance measures;
- Recommending conditions that have high variability in cost among providers;
- Recommending conditions that include both chronic and acute conditions.

The Advisory Group's recommendations for six specific conditions to be provider peer grouped in 2010 are listed in the table above.

The Advisory Group also recommends two additional high priority conditions for peer grouping development after 2010: depression and maternity. The Advisory Group initially included maternity as a recommended condition to peer group in 2010 because it is one of the most prevalent conditions for women and children across all insured populations. However, the Advisory Group realized there are currently no established quality metrics being collected for this condition. The Advisory Group recommends MDH encourage the development and collection of physician and hospital quality measures for maternity to enable this condition to be peer grouped.

Depression is also identified as a high priority condition that should be peer grouped given its prevalence and impact on total population health. Several Advisory Group members were very familiar with the status of the best practice initiative for depression being developed in the DIAMOND Project by the Institute for Clinical Systems Improvement (ICSI). In collaboration, MN Community Measurement is starting to collect and publish quality information on depression outcomes. Advisory Group members familiar with the project felt these initiatives would provide the best basis for access to depression quality measures once it is completed and implemented. The Advisory Group recommends MDH strongly support and prioritize depression as a condition for peer grouping after 2010.

Prevention was also discussed and considered as a specific condition for peer grouping. However, the Advisory Group recognized that prevention quality measures would be included as part of Total Care peer grouping and felt prevention would be more appropriately measured not as a separate specific condition but as part of the total overall health of a population. The Technical Panel agreed with the Advisory Group concern that since appropriate preventive care generally requires the provision of more services rather than less, defining value for Prevention as higher quality at lower cost may not be appropriate. Some Technical Panel members did suggest, however, that Prevention, particularly Pediatric Prevention, can be a condition to peer group in the future because there are more cost

effective, evidence based, preventive interventions and cost effective modes of delivery that are not consistently offered by all providers.

Other conditions that the Advisory Group considered but did not recommend for 2010 include: low back pain, adult prevention, hypertension, prostate cancer, and hip fracture. The Advisory Group suggests these and other conditions identified as a priority by existing quality projects, as well as others, be evaluated for peer grouping in future years as MDH gains experience in implementing peer grouping and has the capacity to undertake more conditions.

UNITS OF ANALYSIS PARAMETERS FOR CONDITION SPECIFIC PROVIDER PEER GROUPING

Recommendation for Condition Specific Units of Measure and Peer Group Parameters			
Condition	**Who to Measure**	**Unit of Analysis**	**Peer Group**
Diabetes	Primary Care Endocrinologist	Clinic site (when possible)	All measured providers
Pneumonia	Hospital	Individual Hospital	All measured hospitals
Heart Failure	Primary Care Cardiology	Clinic site (when possible)	All measured providers
Total Knee Replace	Orthopedic	Surgeon by hospital (if possible) Clinic site (when possible)	All measured providers
Coronary Artery	Primary Care Cardiology	Clinic site (when possible)	All measured providers
Asthma	Primary Care Pediatrician Pulmonologist Allergist	Clinic site (when possible)	All measured providers

As part of the methodology for condition specific peer grouping in 2010, the Advisory Group clearly defined which providers should be peer grouped and at what level peer grouping analysis should occur. The Advisory Group defined the provider to be peer grouped as the most common provider specialties directing a patient's care for each condition. For most conditions, primary care physicians are identified as one of the provider types. Consistent with the Health Care Homes law as stated in Minnesota Statutes §256B.0751, subd.2, the Advisory Group recommends that the definition of primary care include any physician designated as a patient's primary care physician, regardless of his/her specialty designation. This would include any specialist certified as a health care home.

The Advisory Group recommends that wherever possible, peer grouping should occur at the clinic site level. The Technical Panel expressed concerns that current practices in claims data submission would not support peer grouping at the individual practitioner level and not be possible consistently at the clinic level. The Technical Panel acknowledged the value and desire to define the clinic site as the unit of analysis but recommended peer grouping be performed at the medical group level in 2010. The Technical Panel encourages peer grouping to evolve towards clinic level reporting as a high priority, including provider requirements to consistently report claims data at the clinic level.

The Advisory Group recommends peer grouping at the medical group level only if clinic site peer grouping is not feasible. The Advisory Group agreed with the Technical Panel but recommends MDH evaluate the encounter data submitted and to perform peer grouping at the clinic site level for those

sites that can be grouped, and at the system level for others, until their data also supports grouping at the clinic site level.

In addition, for surgical conditions such as Total Knee Replacement, the Advisory Group recommends the collection and reporting of data at the individual surgeon level specific to each hospital. The Advisory Group realizes this recommendation may not be possible to implement in 2010, and some members advocated for delaying individual surgeon level reporting until after peer grouping at the clinic level is well established. Still, members felt this is an area that provides high value information to patients and providers that is not available today. The Advisory Group strongly encourages MDH to evolve data collection for surgical procedures at each hospital that will support analysis at the individual surgeon level.

In order for peer grouping to consistently occur at the clinic site level and at the individual provider level for surgeons, the Technical Panel suggests the State implement a policy that requires a consistent level of use for the National Provider Identifier (NPI) on submitted claims. At this time, the Technical Panel feels reporting of NPIs is varied with some medical groups utilizing one common NPI for all its clinic locations while others use separate NPIs for each of its clinic locations. Similar inconsistencies in reporting at the individual surgeon level currently occur as well. These inconsistencies hinder the ability to assign providers to specific clinic site locations and to identify the individual surgeons performing procedures.

Finally, the Advisory Group and Technical Panel recommend that all providers who are measured for each specific condition should be included in the same peer grouping analysis for that condition rather than creating different categories of providers to analyze separately (e.g. comparing only rural providers against other rural providers or clinics that are part of integrated health systems against other similarly situated clinics). As long as risk adjustment is adequately applied to each provider's patient population, all providers can be fairly compared to each other for the specific condition and true differences in price and utilization between providers can emerge.

The above table summarizes the Advisory Group's Condition Specific recommendations for measurement and peer grouping parameters.

COST ISSUES FOR CONDITION SPECIFIC PROVIDER PEER GROUPING

Cost Issue	Condition Specific Recommendation
Cost Measurement	Calculate both Actual & Repriced methodologies but not necessarily report both for varied audiences
Outlier Adjustment	Set thresholds specific to population size; Remove low outliers; Truncate high outliers for all providers and apply any necessary additional actuarial corrections for small clinics or groups; Continued analysis and improvement of outlier identification and adjustment
Risk Adjustment Software	Commercial software accepted by provider community (examples: ETG by Ingenix, MEGS by Thompson Reuters)
Severity of Illness Adjustment	Apply two levels of risk adjustment, the risk stratification that is part of the selected episode software, and a second level of risk adjustment, such as Adjusted Clinical Groups (ACGs) that identifies co morbidities in greater detail
Demographic Adjustment	Consider some adjustment for income and/or education level of patients but not an immediate priority for provider peer grouping. Payer Mix adjustment to be used as proxy.
Payer Mix Adjustment	Compare by payer categories (Medicare, MN Health Care Programs, Commercial) *AND* Normalize to standard payer mix
Attribution	Utilize a methodology that supports more credible attribution rather than attributing the greatest number of episodes as possible; Patient attributed to Single provider entity: Diabetes, Asthma, Pneumonia, Total Knee Patient attributed to Multiple provider entities: CAD and Heart Failure Continued analysis and improvement of attribution methodology
Services Included	Minnesota residents only, all covered services including pharmacy and which are submitted to the encounter & claims database.

The Advisory Group addressed five primary issues related to developing a cost methodology for condition specific provider peer grouping and final recommendations are summarized in the table above. For purposes of this analysis, cost includes both resource utilization and unit price. All the methods recommended are currently utilized by payers and other organizations performing provider cost comparisons either locally or nationally.

The Advisory Group recognizes the importance for providers and consumers to understand the impact utilization and pricing each contribute toward a provider's costs. In order to segregate the influence of utilization and pricing components, the Advisory Group recommends the peer grouping methodology include calculating an actual cost per episode for each condition based on the provider's actual submitted allowed costs, as well as a repriced cost per episode. The repriced cost per episode would be calculated based on a provider's actual utilization but priced at a common rate that is uniformly

applied to all providers for the same condition. Essentially, a repriced cost allows for the comparison of providers' utilization stated in a currency format.

The Technical Panel was instrumental in providing insight regarding outliers and risk adjustment and the Advisory Group accepted their recommendations. The Advisory Group recommends comparing costs by separate payer categories (e.g. Medicare, Minnesota Health Care Programs and commercial) to provide the greatest transparency and to understand the impact of various payer types on cost. However, the Advisory Group also recommends normalizing providers' costs to a standardized payer mix in order to neutralize the impact of different proportions of patients in public programs and to simplify peer grouping comparison results for consumers.

Valid attribution of patients is often a key area of concern with providers. Providers want to feel confident that the patients on whom their performance measurement is based are actually the patients managed by them. The Advisory Group followed the Technical Panel's recommendation to use an attribution methodology that supports more credible attribution rather than pursuing a goal to attribute as many episodes as possible. This means that patients for whom there is no clear provider managing their care will be excluded from the Peer Grouping analysis.

For some conditions, the Advisory Group felt that attribution to a single provider is not always a realistic representation of where a patient is receiving a significant component of care or who is directing the preponderance of their care. Particularly for heart failure and coronary artery disease, patients can have interventions with several physicians during the course of care for these conditions. The Advisory Group recommends attribution of patients to multiple providers if appropriate for these two specific conditions. The cost and quality information on the secondary level of attributed providers can also help inform primary care physicians when referring patients.

QUALITY ISSUES FOR CONDITION SPECIFIC PROVIDER PEER GROUPING

Condition	Recommended Quality Measure	Weighting Guidelines
Pneumonia	Rate of hospital re-admission for bacterial pneumonia	100%
Pneumonia	Rate of hospital ER visits for pneumonia post discharge	
Diabetes	% of diabetes patients, ages 18-75, who maintain blood pressure less than 130/80	100%
Diabetes	% of diabetes patients, ages 18-75, who lower LDL or "bad" cholesterol to less than 100 mg/dl	
Diabetes	% of diabetes patients, ages 18-75, who control blood sugar so that A1c level is less than 7%	
Diabetes	% of diabetes patients, ages 18-75, who don't smoke	
Diabetes	% of diabetes patients, ages 18-75 ,who take an aspirin daily, for those ages 40 and older	
Diabetes	Rate of hospital admissions for short-term complications	
Diabetes	Rate of hospital admissions for uncontrolled	
Diabetes	Rate of hospital ER visits for diabetes	
Asthma	Use of appropriate medications for people with asthma	35%
Asthma	Rate of hospital ER visits for asthma	65%
Asthma	Rate of hospital re-admissions for asthma	
Asthma	Rate of hospital admissions for asthma	
CAD	% of vascular disease patients, ages 18-75, who maintain blood pressure less than 130/80	100%
CAD	% of vascular disease patients, ages 18-75, who lower LDL or "bad" cholesterol to less than 100 mg/dl	
CAD	% of vascular disease patients, ages 18-75, who don't smoke	
CAD	% of vascular disease patients, ages 18-75, who take an aspirin daily	
CAD	Rate of hospital admissions for CAD	
Heart Failure	Rate of hospital admissions for congestive heart failure	100%
Heart Failure	Rate of hospital ER visits for heart failure	
Heart Failure	30-day mortality after hospital discharge	
Total Knee	Review rate of ER visits & re-admission measures as well as other potential measures prior to determining if peer grouping results will be shared publicly	100%

To assist the Advisory Group in identifying quality measures for each specific condition, MDH staff provided the Advisory Group a comprehensive list of existing quality measures for each condition that are endorsed by the National Quality Forum. In recommending appropriate quality measures for each of the specific conditions, as well as for Total Care, the Advisory Group does not intend for new quality measures to be developed and collected for the sole purpose of provider peer grouping. In an effort to minimize additional, new data collection burdens for providers, the Advisory Group selected quality measures that providers will already be required to collect and report through other initiatives or that may be calculated using claims data. However, the Advisory Group expressed serious concerns throughout the series of meetings about the usefulness of the process and intermediate outcome measures that are currently available as quality metrics. There was strong consensus that functional

outcome measures must be developed and collected to truly inform consumers, purchasers and providers about real and meaningful differences in quality.

Given the limited availability of outcome based quality measures, the Advisory Group felt that also including a collection of process measures and hospital avoidance measures would be a better representation of a provider's quality for specific conditions. Recognizing that all quality measures for a provider will be summarized into a single quality score for purposes of peer grouping, the Advisory Group expressed its concerns with the inherent value judgments required in combining measures and feels it is essential that the results of each individual quality measure for each provider be made available for all audiences.

As the Advisory Group reviewed potential quality measures for Total Knee Replacement, many members felt the available measures are inadequate at this time. Limited to general surgical measures and rates of hospital re-admission and emergency visits, many Advisory Group members felt these measures do not reflect variation that is due to a provider's quality of care. However, other Advisory Group members emphasized tremendous provider cost variation exists in total knee replacement. Because total knee replacements are primarily an elective and planned procedure, peer grouping data on cost and quality for this condition in particular could have significant and immediate impact for consumers and referring providers as they are encouraged to make value based health care decisions. The Advisory Group recommends Total Knee to be peer grouped in 2010 using the above recommended quality measures, but also recommends that other potential quality measures and peer grouping results be reviewed for reasonableness and validity to determine if results should be shared publicly in 2010.

In order to maximize opportunities to measure quality, the Advisory Group recommends not using any pre-constructed composite quality measures, such as the optimal care D5 measure for diabetes that is used by Minnesota Community Measurement, but rather including each of the independent component measures that comprise the pre-constructed composites. The Advisory Group feels many of the existing composite measures do not allow providers to balance weaker quality in some areas with stronger quality in other areas, whereas valuing each measure independently will allow a provider's strengths and weaknesses to be highlighted. However, for diabetes in particular, it is not the intent for provider peer grouping to detract or compete with the D5 measure that Minnesota Community Measurement has made significant efforts to promote among providers and consumers. The Advisory Group feels the recommended quality measures for diabetes are appropriate for peer grouping purposes but to ensure users are also aware of the D5 measure, it is recommended that the D5 measure be prominently displayed or referenced along side the provider peer grouping results for diabetes.

MDH engaged an outside expert consultant, Dr. Michael Pine from Michael Pine and Associates, to assist the Advisory Group in the creation of a composite quality measure. More specifically, Dr. Pine provided advice on how to consider weighting individual measures for calculation of a single composite quality measure. The Advisory Group agreed with Dr. Pine's proposed approach of first creating intermediate sets of composite metrics composed of similar types of measures (i.e. outcome measures, process measures) and then nesting them together to create an overall composite quality measure. This approach allows a proper balance to be maintained among different category types of quality measures regardless of how many measures may be used to characterize each specific category.

Advisory Group members differed in opinion regarding specific weights to assign to the intermediate composites. Some members felt recommending specific weights placed a value judgment on quality measures that may not be consistent with the end user's perspective. Other members felt that equal weighting was in itself placing a value judgment. Overall, the Advisory Group agrees recommending specific weights based on reasonable rationale is appropriate to provide a "baseline" starting point for creating a single quality measure for provider peer grouping purposes. It is the Advisory Group's full expectation that the weighting could be modified annually as quality measures improve and the provider peer grouping process evolves. Thus, the Advisory Group, based on the opinion of Dr. Pine, recommends a composite quality measure for each specific condition be based 65% on outcome or intermediate outcome type measures, and 35% on process type measures.

Of the six specific conditions the Advisory Group recommends to be peer grouped in 2010, only one condition (Asthma) includes both outcome and process type measures contributing towards an overall composite quality measure. The other five conditions include only outcome or intermediate outcome type measures. The Advisory Group, reflecting on its earlier recommendation to prefer outcome measures over process measures, notes that its weighting recommendation does not need to be altered in the absence of process measures. For these five conditions, only outcome or intermediate outcome measures will be used to calculate an overall composite quality measure and each will contribute in equal proportion to the composite quality score.

Challenged by the fact that there are currently no proven methods to determine which set of quality measures and weighting may be more appropriate than another set, the Advisory Group acknowledges their recommendations for selected quality measures and weighting are only a representation of the collective opinion of the Group members. The opinions were collected through a highly qualitative process and did not evaluate each measure with actual data specific to Minnesota, but the Group did seek out external opinions from experts to help inform their recommendations.

V.TOTAL CARE RECOMMENDATIONS

UNITS OF ANALYSIS & COST ISSUES FOR TOTAL CARE PROVIDER PEER GROUPING

Cost Issue	Total Care Specific Recommendation
Who to Measure	Total Care Physician: All providers functioning as primary care, regardless of specialty type. Total Care Hospital: All hospitals
Unit of Analysis	Total Care Physician: Clinic site (when possible) Total Care Hospital: Individual Hospital site
Peer Grouping	Total Care Physician: All measured providers Total Care Hospital: All measured hospitals
Cost Measurement	Calculate both Actual & Repriced methodologies but not necessarily report both for varied audiences
Outlier Adjustment	Set thresholds specific to population size; *Include* low outliers; Truncate high outliers for all providers and apply any necessary additional actuarial corrections for small clinics or groups; Continued analysis and improvement of outlier identification and adjustment
Risk Adjustment Software	Commercial software accepted by provider community (examples: ERG by Ingenix, ACG by Johns Hopkins)
Severity of Illness Adjustment	Apply *one* level of risk adjustment
Demographic Adjustment	Consider some adjustment for income and/or education level of patients but not an immediate priority for provider peer grouping. Use payer mix as proxy.
Payer Mix Adjustment	Compare by payer categories (Medicare, MN Health Care Programs, Commercial) *AND* Normalize to standard payer mix
Attribution	Utilize a methodology that supports more credible attribution rather than attributing the greatest number of episodes as possible; Patient attributed to Single provider entity only Non-users attributed based on three years of data if available, otherwise pro-rate members across providers. Continued analysis and improvement of attribution methodology
Services Included	Minnesota residents only, all covered services including pharmacy and which are submitted to the encounter & claims database.

Total Care is a population based measure that determines the resource use and cost of provider organizations to manage similar populations of patients for the full spectrum of their health care needs. The Advisory Group defines Total Care to include all covered medical services for all medical conditions incurred by an insured member over a defined period of time (usually one year). Members

who do not receive any care during the defined time period are also included in the Total Care measure. While Total Care includes all covered services including physician, hospital, ancillary, and pharmacy, it is most commonly used as a primary care physician comparison measure. Total Care will not include any services for which claims are not submitted to the encounter database, such as long term care and potentially not all home care services.

The Advisory Group was also charged with recommending a peer grouping methodology for Total Care provided by hospitals. Total Care for a hospital will represent all the admissions to a hospital incurred by insured members over a defined period (usually one year). Unlike Total Care for physicians, Total Care for Hospitals will not include members who were not admitted, nor will it include costs incurred outside the hospital. This metric will then be case mix adjusted to derive a quality and cost "market basket" for each hospital.

The Advisory Group's recommendations for a Total Care cost methodology are consistent with its Condition Specific recommendations with a few deviations as noted in the summary table above. Similar to its recommendation for Condition Specific, the Advisory Group advises the definition of primary care include any physician designated as a patient's primary care physician, regardless of his/her specialty designation. Additionally, the Advisory Group recommends that as Health Care Homes are implemented and other products emerge that require a designated assignment to a managing provider, attribution for these members will be based on actual provider designation made by the patient.

The Advisory Group discussed attribution for Total Care and reached the same recommendations as it did for Condition Specific. However, Total Care is intended to be a population wide measure and it includes all members even if they did not receive any care during the year. Therefore, the attribution methodology for Total Care must include a process for non-users to be attributed to a provider. The Advisory Group, with the advice of the Technical Panel, recommends utilizing up to three years of most current data for non-users to determine if an attribution can be made based on care provided historically. The Advisory Group realizes this methodology cannot be implemented for several years until the data matures.

Until then, most risk adjustment grouper software, such as Adjusted Clinical Groups from Johns Hopkins, includes a process to assign non-users. A common method used is prorating non-users across all providers. The Advisory Group recommends utilizing the methodology incorporated into the selected commercial risk adjustment grouper software until historical data is available. Some members of the Advisory Group felt this method is not ideal since it does not allow provider attribution to be based on innovative ways of delivering care that are not captured through the claims submission process, such as provider sponsored outreach programs or mobile clinic units. Since the data source for attribution and cost assignment is currently limited to the multi-payer claims database collected by the State, only information available through claims data can be utilized.

QUALITY ISSUES FOR TOTAL CARE PROVIDER PEER GROUPING

Condition	Total Care Physician Quality Measures	Measurement Category	Weighting Guidelines
Breast Cancer	1. % of women, ages 52-69, who had a mammogram during	Prevention	20%
Cervical	2. % of women, ages 24-64, who received a Pap test in the last	Prevention	
Childhood Immunization	3. % of children who received all of these vaccinations by the age of 2: 1) DTP, 2) Polio, 3) MMR, 4) H Influenza B, 5) HepB, 6) Chicken Pox, 7) pneumococcal	Prevention	
Chlamydia Screening	4. % of sexually-active females, ages 16-25, who received a Chlamydia test	Prevention	
Colorectal Screening	5. % of adults, ages 51-80, who received 1 or more of 4 proven screening tests: 1) fecal occult blood, 2) flex sigmoid, 3) double contrast barium enema, 4) colonoscopy	Prevention	
Colds	6. % of children, 3 months to 18 years, diagnosed with a cold and not given an antibiotic	Minor Acute	10%
Sore Throat	7. % of children, ages 2-18, diagnosed with a sore throat and given a strep test and antibiotics	Minor Acute	
High Blood Pressure	8. % of adults, ages 18-85, diagnosed with high blood pressure that had a blood pressure reading lower than 140/90	Minor Acute	
Vascular	9. % of vascular disease patients, ages 18-75, who maintain blood pressure less than 130/80	Chronic Disease Outcomes	25%
Vascular	10. % of vascular disease patients, ages 18-75, who lower LDL or "bad" cholesterol to less than 100 mg/dl	Chronic Disease Outcomes	
Vascular	11. % of vascular disease patients, ages 18-75, who don't smoke	Chronic Disease Outcomes	
Vascular	12. % of vascular disease patients, ages 18-75, who take an aspirin daily	Chronic Disease Outcomes	
Diabetes	13. % of diabetes patients, ages 18-75, who maintain blood pressure less than 130/80	Chronic Disease Outcomes	
Diabetes	14. % of diabetes patients, ages 18-75, who lower LDL or "bad" cholesterol to less than 100 mg/dl	Chronic Disease Outcomes	
Diabetes	15. % of diabetes patients, ages 18-75, who control blood sugar so that A1c level is less than 7%	Chronic Disease Outcomes	
Diabetes	16. % of diabetes patients, ages 18-75, who don't smoke	Chronic Disease Outcomes	
Diabetes	17. % of diabetes patients, ages 18-75 ,who take an aspirin daily, for those ages 40 and older	Chronic Disease Outcomes	
Asthma	18. % asthma patients, ages 5-56, who were prescribed appropriate medication	Chronic Disease Process	10%

Condition	Total Care Physician Quality Measures	Measurement Category	Weighting Guidelines
Pneumonia	19. Rate of hospital re-admission for pneumonia	Hospital Avoidance	35%
Pneumonia	20. Rate of hospital ER visits for pneumonia post discharge	Hospital Avoidance	
Diabetes	21. Rate of hospital admissions for short-term complications	Hospital Avoidance	
Diabetes	22. Rate of hospital admissions for uncontrolled diabetes	Hospital Avoidance	
Diabetes	23. Rate of hospital ER visits for diabetes	Hospital Avoidance	
Asthma	24. Rate of hospital admissions for asthma	Hospital Avoidance	
Asthma	25. Rate of hospital re-admissions for asthma	Hospital Avoidance	
Asthma	26. Rate of hospital ER visits for asthma	Hospital Avoidance	
CAD	27. Rate of hospital admissions for CAD	Hospital Avoidance	
Heart Failure	28. Rate of hospital admissions for congestive heart failure	Hospital Avoidance	
Heart Failure	29. Rate of hospital ER visits for heart failure	Hospital Avoidance	
Heart Failure	30. 30-day mortality after hospital discharge	Hospital Avoidance	
Total Knee	31. Rate of hospital re-admissions for total knee replacement (potential)	Hospital Avoidance	
Total Knee	32. Rate of hospital ER visits after knee surgery (potential)	Hospital Avoidance	

Condition	Total Care Hospital Quality Measures	Measurement Category	Weighting Guidelines
Heart Failure	1. Rate of hospital admissions for congestive heart failure	Composite ER/ Readmit Outcome	20%
Heart Failure	2. Rate of hospital ER visits for heart failure	Composite ER/ Readmit Outcome	
Pneumonia	3. Rate of hospital re-admission for bacterial pneumonia	Composite ER/ Readmit Outcome	
Pneumonia	4. Rate of hospital ER visits for pneumonia post discharge	Composite ER/ Readmit Outcome	
Acute Myocardial Infarction (AMI)	5. Aspirin at arrival	Composite Process	15%
AMI	6. Aspirin at discharge	Composite Process	
AMI	7. ACE inhibitor or ARB for left ventricular systolic dysfunction(LVSD)	Composite Process	
AMI	8. Adult smoking cessation advice / counseling	Composite Process	
AMI	9. Beta-blocker prescribed at discharge	Composite Process	
AMI	10. Fibrinolytic therapy received within 30 minutes of hospital arrival	Composite Process	
AMI	11. Primary percutaneous coronary intervention (PCI) received within 90 minutes of hospital arrival	Composite Process	
Surgical Care Improvement Project (SCIP)	12. Surgery patients who received appropriate venous thromboembolism prophylaxis within 24 hours prior to surgery to 24 hours after surgery	Composite Process	
SCIP	13. Prophylactic antibiotic received within one hour prior to surgical incision – Overall rate	Composite Process	
SCIP	14. Prophylactic antibiotic selection for surgical patients – Overall rate	Composite Process	
SCIP	15. Prophylactic antibiotics discontinued within 24 hours after surgery end time – Overall rate	Composite Process	
SCIP	16. Surgery patients with recommended venous thromboembolism prophylaxis ordered	Composite Process	
SCIP	17. Cardiac surgery patients with controlled 6 a.m. postoperative blood glucose	Composite Process	
SCIP	18. Surgery patients with appropriate hair removal	Composite Process	
Infection	19. Ventilator associated pneumonia bundle compliance for ICU patients	Composite Process	
Infection	20. Central line bundle compliance for ICU patients	Composite Process	

Condition	Total Care Hospital Quality Measures	Measurement Category	Weighting Guidelines
Infection	21. Hospital-acquired infections (HAI): Surgical site infection rate for vaginal hysterectomy	Composite Process	See previous page
Infection	22. Hospital-acquired infections (HAI): Surgical site infection rate for total knee arthroplasty	Composite Process	
Inpatient Quality	23. Abdominal aortic aneurysm (AAA) repair volume	Composite Process	
Inpatient Quality	24. Coronary artery bypass graft (CABG) volume	Composite Process	
Inpatient Quality	25. Percutaneous transluminal coronary angioplasty (PTCA) volume	Composite Process	
Patient Experience	26. Patient experience	Patient Experience	15%
Heart Failure	27. 30-day mortality after hospital discharge	Composite Hospital Mortality	30%
Inpatient Quality	28. Abdominal aortic aneurysm repair mortality rate	Composite Hospital Mortality	
Inpatient Quality	29. Hip fracture mortality rate	Composite Hospital Mortality	
Inpatient Quality	30. Percutaneous transluminal coronary angioplasty (PTCA) mortality rate	Composite Hospital Mortality	
Inpatient Quality	31. Coronary artery bypass graft (CABG) mortality rate	Composite Hospital Mortality	
Composite Mortality	32. Acute Myocardial Infarction	Composite Hospital Mortality	
Composite Mortality	33. Congestive Heart Failure	Composite Hospital Mortality	
Composite Mortality	34. Acute Stroke Mortality	Composite Hospital Mortality	
Composite Mortality	35. GI Hemorrhage Mortality	Composite Hospital Mortality	
Composite Mortality	36. Hip Fracture Mortality	Composite Hospital Mortality	
Composite Mortality	37. Pneumonia Mortality	Composite Hospital Mortality	
Patient Safety	38. Decubitus ulcer	Composite Inpatient Complication	20%
Patient Safety	39. Death among surgical inpatients with serious treatable complications	Composite Inpatient Complication	
Patient Safety	40. Postoperative pulmonary embolism or deep vein thrombosis	Composite Inpatient Complication	
Patient Safety	41. Obstetric trauma – vaginal delivery with instrument	Composite Inpatient Complication	
Patient Safety	42. Obstetric trauma – vaginal delivery without instrument	Composite Inpatient Complication	
Composite Pediatric Patient Safety	43. Accidental puncture or laceration	Composite Inpatient Complication	
Composite Pediatric Patient Safety	44. Decubitus Ulcer	Composite Inpatient Complication	

Condition	Total Care Hospital Quality Measures	Measurement Category	Weighting Guidelines
Composite Pediatric Patient Safety	45. Iatrogenic Pneumothorax	Composite Inpatient Complication	See previous page
Composite Pediatric Patient Safety	46. Postoperative Sepsis	Composite Inpatient Complication	
Composite Pediatric Patient Safety	47. Postoperative Wound Dehiscence	Composite Inpatient Complication	
Composite Pediatric Patient Safety	48. Selected Infections due to Medical Care	Composite Inpatient Complication	
Composite Patient Safety	49. Decubitus Ulcer	Composite Inpatient Complication	
Composite Patient Safety	50. Iatrogenic Pneumothorax	Composite Inpatient Complication	
Composite Patient Safety	51. Selected Infections due to Medical Care	Composite Inpatient Complication	
Composite Patient Safety	52. Postoperative Hip Fracture	Composite Inpatient Complication	
Composite Patient Safety	53. Postoperative Pulmonary Embolism	Composite Inpatient Complication	
Composite Patient Safety	54. Postoperative Sepsis	Composite Inpatient Complication	
Composite Patient Safety	55. Postoperative Wound Dehiscence	Composite Inpatient Complication	
Composite Patient Safety	56. Accidental puncture or laceration	Composite Inpatient Complication	

Unlike Condition Specific, there are currently no existing quality measures, or even a panel of measures, that are commonly used to measure Total Care. The Advisory Group needed to create a quality measure that would function as a proxy for Total Care. Based on advice from the Technical Panel, the Advisory Group recommends including as many valid quality measures as possible for Total Care in order to maximize opportunities to measure quality for as much of the population as possible. The Advisory Group recommends the above thirty-two quality measures be used for Total Care physician peer grouping and fifty-six quality measurers be used for Total Care hospital peer grouping.

MDH staff provided the Advisory Group a comprehensive list of existing quality measures endorsed by the National Quality Forum. In addition to measures collected by MN Community Measurement, MDH staff also included measures that are collected and reported by MN Hospital Quality Report, Hospital Compare, and that can be calculated using available hospital discharge data using algorithms developed by the Agency for Healthcare Research and Quality. All the quality measures recommended are actively being collected or can be calculated from claims.

Similar to the Advisory Group's recommendation for creating an overall composite quality measure for specific conditions, the Advisory Group also recommends creating intermediate composite quality measures for Total Care. The Advisory Group, based on Dr. Pine's proposal, recommends calculation of a physician Total Care quality measure based on the following types of measures with the

corresponding weights: *preventive (20%), minor acute (10%), chronic disease outcomes (25%), chronic disease process (10%), and hospital avoidance (35%).* The Advisory Group recommends calculation of a hospital Total Care quality measure based on the following types of measures wit the corresponding weights: *composite process (15%), composite ER/readmission outcome (20%), composite hospital mortality (30%), composite inpatient complication (20%), patient experience (15%).* As with its weighting recommendation for specific condition, it is the Advisory Group's full expectation that the weighting may be modified as quality measures improve and the provider peer grouping process evolves.

Challenged by the fact that there are currently no proven methods to determine which set of quality measures and weighting may be more appropriate than another set, the Advisory Group acknowledges their recommendations for selected quality measures and weighting are only a representation of the collective opinion of the Group members. The opinions were collected through a highly qualitative process and did not evaluate each measure with actual data specific to Minnesota, but the Group did seek out external opinions from experts to help inform their recommendations.

VI. COMBINING COST & QUALITY RECOMMENDATIONS

	QUALITY MEASURE	COST MEASURE	VALUE MEASURE (COMBINED COST & QUALITY) PRINCIPLES
CONDITION SPECIFIC	Single score for each provider measured on a continuum relative to peers	Single score for each provider measured on a continuum relative to peers	• Allows data to determine natural formation of peer groupings based on similarities; • Allows data to determine natural number of peer groups based on similarities and differences; • Does not force artificial differences to be defined between provider peer groups; • Does not require making a value judgment regarding the weight of cost versus quality.
TOTAL CARE			

The Advisory Group struggled with the task of how to best combine cost and quality in order to create a single composite measure that reflects a provider's relative value compared to its peers. The majority of members do not feel comparing providers based on a single value score (the amount of quality per dollar of cost) is an optimal way to convey cost and quality information. While a single value simplifies comparisons, it also combines data in a way that makes the whole potentially less informative than its parts. A single value score can be a good representation to assess the amount of quality per dollar spent but forgoes other meaningful comparisons. For example, low quality providers performing at a low cost look the same as high quality providers performing at high cost in this type of analysis. A simple two dimensional display of quality versus cost can simultaneously inform users which providers performed better on quality metrics alone, which providers performed better on cost measures alone, and which providers performed better on both measures without the need to reduce value into a single score.

Depending on the approach taken to combine cost and quality into a single value measure, the composite score may inherently assume some relative importance of a provider's cost versus a provider's quality. The Advisory Group believes that consumers differ in the significance they place on cost or quality based on their own value systems and priorities---the Advisory Group prefers allowing consumers to apply their own definition of value when comparing and determining the value of providers' care. Depending on the situation and needs of the user, greater value may simply be the least costly or only the highest quality regardless of cost. However, the statute is clear that the peer grouping system must include a combined measure of quality and cost. MDH has stated that it intends to publish the cost and quality components separately, in addition to the required combined measure.

In response to the statutory requirement to develop a methodology to peer group using a single composite value measure, the Advisory Group suggests an analytical method be used which provides for the following:

- Allows the data to determine which providers are most similar and therefore should be peer grouped together rather than using pre-determined definitions for peer groups (e.g.: above average cost & below average quality, above average cost & above average quality, etc);
- Allows the data to determine the natural number of peer groups based on similarities and differences;
- Does not force artificial differences to be drawn between providers that may appear to be on the cusp of two peer groups if using pre-determined definitions for peer groups;
- Does not require making a value judgment regarding the weight of cost versus quality to peer group providers.

The Advisory Group recommends calculating a single quality score and a single cost score that measure each provider relative to its peers along a continuum. The Advisory Group recommends an analytical method to sort providers most similar in their cost and quality scores into peer groups, differentiating them from those with minimal similarities.

Advisory Group members prefer the calculation of a single quality score and a single cost score for each provider and their display as independent variables, without the assignment of a single value score to each provider. The scores for cost and quality could be combined into one graphical representation on a scatter plot where each provider is represented by a single point---the intersection of his/her relative quality and cost scores. Advisory Group members preferred how this two dimensional representation would allow consumers to visualize both cost and quality at the same time but also allow consumers to evaluate each component independently as well.

The Advisory Group suggests a scatter plot representation of providers evaluated on the two dimensions of cost and quality could be interpreted to meet the requirements of the law to "develop [a] peer grouping system for providers based on a combined measure that incorporates both provider risk-adjusted cost of care and quality of care." The Advisory Group would urge the Commissioner to consider this suggestion but would also recommend that a scatter plot representation of providers be available to all audiences as one display of peer grouping results in addition to whatever final methodology is ultimately used to measure a combined cost and quality value.

VII. PRESENTING PEER GROUPING DATA TO DIFFERING AUDIENCES RECOMMENDATIONS

<table>
<tr><th>CONSUMERS</th><th>PROVIDERS</th><th>PAYERS</th></tr>
<tr><td>Use of a web based, interactive tool that allows for some user customization.</td><td>Use of a web based, interactive tool that allows for some user customization.</td><td>Use of a web based, interactive tool that allows for some user customization.</td></tr>
<tr><td>High level summaries of data with ability to drill down to greater levels of detail.</td><td>Provide detailed electronic file specific to the provider's utilization and cost data to enable utility for improvement.</td><td>Provide detailed electronic file specific to all providers' utilization to enable utility for improvement.</td></tr>
<tr><td>Data should be displayed in a manner that shows meaningful statistical differences between providers.</td><td colspan="2" rowspan="2"></td></tr>
<tr><td>Access to provider peer grouping data should consider limitations for areas and persons with less internet capabilities, and the needs of the disabled population such as those who are vision impaired.</td></tr>
<tr><td colspan="3">Resources should be allocated for education and promotion of the provider peer grouping tool for all users.</td></tr>
</table>

The Advisory Group realizes that to increase user adoption of peer grouping information, the results of peer grouping analysis must be presented in ways that are meaningful to specific audiences. As a general recommendation, the Advisory Group suggests MDH prominently publish separately the cost and quality scores of providers as well as the subcomponents of those scores for each audience. The table above summarizes the Advisory Group's recommendations about the types of information to be provided for each specific audience.

The Advisory Group consistently expressed a preference for transparency wherever possible, but also recommends consumers be directed toward simplified, high level summaries of peer grouping results to facilitate ease of understanding; consumers should have the ability to drill down to further detail if they are interested in doing so. The Advisory Group foresees providers and payers utilizing more detailed levels of the provider peer grouping results than consumers but feels the same level of detail should be made available to all users. It is also important that peer grouping results identify meaningful and statistically significant differences between providers, particularly for the consumer audience if they are going to use the results to inform them in selecting a provider.

Separately from the provider peer grouping results and analysis, the Advisory Group recommends MDH create detailed electronic utilization and cost files specific to each provider that can be used to identify areas for learning and improvement. Supplying providers with a single data file of all their attributed patients' costs and utilization provided by themselves, referral providers, and hospitals, will be a new and highly valuable resource for providers to understand referral patterns and the cost of their referral patterns across their entire population. Currently, if providers even receive similar data, they are only able to analyze their data by a specific payer and often only for certain products, not across their entire insured population in a consistent way.

The Advisory Group discussed concerns with sharing specific payer specific information about providers with the payer audience. There was concern that payers could use the cost information as leverage in contract negotiations with providers and could have the unintended consequence of causing shadow pricing. The Advisory Group did feel utilization data would be helpful for payers to have a broader comparison of providers' resource use across their entire population and not just for the payer's own enrollees, which may be small for some providers. Therefore, the Advisory Group recommends providing payers with a similar detailed electronic file that includes data for all providers and all payers, but to only provide utilization and resource use data and not any cost information.

VIII. NEXT PHASE FOR PROVIDER PEER GROUPING

The Advisory Group appreciates the opportunity to provide input and recommendations regarding the provider peer grouping process and methodology but realizes the State is just beginning its work on this initiative. The Advisory Group expects that methodologies will evolve and become more refined as research and advancements are made in this area and as the State becomes more experienced with provider peer grouping over time. The Advisory Group spent time discussing how provider peer grouping might evolve in the near future and beyond and offers the below recommendations, some of which are reiterated in other sections of this report.

- Continue to seek stakeholder input at their discretion, either through an Advisory Group or other format, regarding provider peer grouping issues.
- Review the initial peer grouping results with stakeholders beginning in June 2010 and prior to September, 2010 when results are first published. Some Advisory Group members felt strongly that more time should be allowed to review results, particularly with providers, and refine methodologies prior to publication. Other members felt strongly that improvements to peer grouping methodologies and uses can be better identified through the public process. These members felt initial publication of valid, accurate peer grouping results should occur by September 2010 so feedback and the learning process regarding peer grouping can commence.
- Develop cost and quality measures that cover major populations including children, elders, and persons with disabilities.
- Expand provider peer grouping for Total Care (and Condition Specific, if applicable) to compare aggregated medical groups and care systems as a unit of analysis in order to measure a system's overall value in providing coordinated primary care, specialty physician, hospital, and pharmacy services.
- Inventory quality measurement gaps immediately in order to begin data collection as soon as possible including the following needs: functional outcome measures, measures of health rather than illness, measures with evidence based links to positive outcomes, patient satisfaction and access measures, and measures to evaluate population illness trends over time. Within two years, develop quality measures for overall chronic disease care as a whole, depression, maternity care, and preventive services.
- Monitor national and regional quality initiatives and benchmark against national or regional benchmarks whenever possible.
- Make efforts to create synergies with other health policy and reform initiatives that may be occurring locally, regionally, or nationally. Efforts should be integrated across communities and institutions whenever possible in order to maximize resources dedicated toward health improvement.

IX. ADDITIONAL RECOMMENDATIONS

During the course of the Advisory Group discussions, several overarching recommendations emerged that should be applied to all the specific recommendations presented in this report. In addition, other recommendations arose that are not specifically related to the provider peer grouping methodology but the Advisory Group feels are important for the Commissioner to consider. These recommendations are discussed below.

1. Final methodology should be informed by the actual data and should be modified as needed to address shortcomings in the data or other issues that materialize through analysis.

   The Advisory Group was cautious in establishing firm definitions for issues such as outliers, number of peer groups, and valid patient sample sizes. The Advisory Group recommends that peer grouping apply standard statistical methods when appropriate and utilize the actual data to define such questions as what dollar threshold qualifies as an outlier and how many observations are needed to produce statistically valid and stable results. Furthermore, given the fact that the encounter claim data submission process is newly established in 2009 and the data submitted have never before been used for any purpose, understanding, identifying, and accommodating any constraints the data present will need to occur during the initial year of peer grouping.

2. Final methodology should be as transparent as possible to all interested parties.

   The Advisory Group wishes to reiterate that the methodology and process should remain as accessible and transparent as possible to all users. While MDH has emphasized its intent for a transparent process, the Advisory Group stresses the importance of maintaining methodological transparency with any outside commercial vendors MDH may use to assist with the peer grouping analysis. For example, which ever commercial risk adjustment software package is selected, it will be critical for provider acceptance that the algorithms used to risk adjust be available and understood by providers. The Technical Panel also recommends that the selected risk adjustment software be transparent and flexible enough to allow MDH the ability to modify any algorithms to better suit its needs.

3. Health reform efforts should be aligned, coordinated, and simplified.

   Minnesota is in the midst of implementing several health reform initiatives mandated in the 2008 Health Reform Law. As a result, different portions of health reform may address some of the same conditions but in differing ways. For example, provider peer grouping and baskets of care both address diabetes but address different issues related to the disease. The Commissioner should make efforts for programs to be coordinated and to be aware that increased complexity and administrative burden for providers could result as an unintended consequence if health reform initiatives are not prioritized and simplified when possible.

4. Quality Measures should be expanded to include functional outcomes and include a more macro view of health outcomes and their impact to society.

   The Advisory Group recognizes that quality measurement is an area of health research that is actively being developed and improved both locally and nationally. The Advisory Group recommends the State encourage quality measurement research that identifies more outcome based measures and that broadens the definition of outcomes to include the impact of health outcomes on society. Examples of measures could include patient function levels in activities of daily living, percent of restored mobility for a patient after joint replacement or traumatic injuries, percent in decreased workers' compensation costs and regained productivity due to successful back surgery or rehabilitation, and reduced burden on social services due to well managed depression, brain injuries, and other conditions.

5. Future consideration should be given to understanding and adjusting for the influence of plan and benefit designs on resource use.

   The Technical Panel suggests provider peer grouping methodology adjust for differences in patients' health plan and benefit designs. The Technical Panel suggests this is another area of risk-adjustment that is not often accounted for in peer grouping but can have significant influence on the amount of services provided. For example, a provider that sees a larger portion of patients who have less comprehensive benefit coverage may utilize fewer resources compared to providers who see patients with richer benefit coverage.

6. Consideration should be given to other sources of provider payment that are not represented in the encounter and pricing data collected by the State.

   The Technical Panel and the Advisory Group recognize that all health care services that are not captured in the encounter data collected through claims will not be included in provider peer grouping. Examples of such payments include uncompensated care provided to the uninsured, disproportionate share payments to hospitals, and contract risk sharing arrangements between providers and health plans. The Advisory Group distinguished that some of these payments, such as disproportionate share and contract risk arrangements, are supplemental payments made to providers for services that have already been submitted and partially reimbursed through normal claims processes. Other types of payments, such as direct payments from uninsured patients, are additional revenues that providers do not collect through claim process and correspondingly, the services provided to these patients are not reported through the claims process either.

   Recognizing that identification and accurate quantification of these types of supplemental and additional payments may be difficult, the Advisory Group recommends that to the extent all revenue, regardless of the source, can be captured in some manner with its matching utilization, then appropriate adjustments and attribution should be made to account for dollars and/or utilization not reported through the encounter database. While it is important and accurate to include all provider payment sources, the Advisory Group is also wary of causing unintended consequences such as discouraging providers from serving the uninsured,

underinsured, and government health program enrollees if including these payments negatively impacts their provider peer grouping results.

Some of these types of payments can currently be accounted for through public reporting, such as disproportionate share payments and hospital uncompensated care. Other types, particularly risk sharing arrangements and clinic provided uncompensated care, are a growing portion of a provider's total revenue but cannot be easily estimated at this time. The Advisory Group recommends a methodology be developed to collect information for those significant sources of revenue and utilization that are not currently reported or collected.

7. Encounter and claims database should be carefully considered for uses beyond provider peer grouping.

The Advisory Group recommends the State expand the use of the encounter and pricing data it is collecting to better inform itself about the health of the population and the affordability of health care, two of the guiding principles of Minnesota's Health Reform. The mandated submission of encounter and pricing data provides a rich resource of data that can help Minnesota attain meaningful, transformative health reform beyond provider peer grouping, while maintaining complete patient confidentiality. Some examples of expanded use identified by the Advisory Group are 1) evaluating the effectiveness over time of Health Care Homes and Baskets of Care, 2) identifying conditions with high variability for purposes besides peer grouping, such as care improvement, 3) identifying health care disparities in specific geographic areas or among population subgroups and 4) creating geographic profiles of health and health care resource use across Minnesota, much like a Dartmouth Atlas of Health Care.

Recognizing the importance of maintaining patient confidentiality and preventing inappropriate uses of the data, the Advisory Group recommends the Commissioner 1) identify appropriate research and other uses and guidelines to protect data confidentiality, and 2) advocate for a change to Minnesota Statutes, 62U.04, subd. 4 and 5 which currently limits the data submitted for the purposes of provider peer grouping.

X. APPENDIX

APPOINTED ADVISORY GROUP MEMBERS

Name / Information	Appointed by
Charles Fazio, MD *Senior Vice President and Chief Medical Officer* Medica Health Plans *Co-chair*	*Commissioner*
Jan Malcolm *Chief Executive Officer* Courage Center *Co-chair*	*Commissioner*
Terry Cahill, MD United Hospital District Clinics	*Minnesota Medical Association*
Timothy J. Crimmins, MD *Vice President & Director of Health, Safety, and Environment* General Mills	*Minnesota Business Partnership*
Peter Dehnel, MD All About Children Pediatrics, P.A.	*Minnesota Medical Association*
Darryl Dykes, MD, Ph.D. Twin Cities Spine Center	*Minnesota Medical Association*
John Frederick, MD *Vice President & Chief Medical Officer* PreferredOne	*Minnesota Council of Health Plans*
Keith D. Harvey *Chief Executive Officer* Virginia Regional Medical Center	*Minnesota Hospital Association*
Doug Hiza, MD *Medical Director* Blue Cross Blue Shield / Blue Plus of Minnesota	*Minnesota Council of Health Plans*

Name / Information	Appointed by
Nathan A. Moracco *Director, Employee Insurance Division* Minnesota Management & Budget	*Minnesota Management & Budget (SEGIP)*
Paul Mueller *Vice President* Education Minnesota	*Education Minnesota*
Christine Norton National Breast Cancer Coalition	*Americans for Quality Health Care*
Karen Peed *Health Care Program Mgr Sr* Minnesota Department of Human Services	*Minnesota Department of Human Services*
Candace S. Simerson, CMPE *President* Minnesota Eye Consultants, PA	*Minnesota Medical Group Management Association*
David K. Wessner *President & CEO* Park Nicollet Health Services	*Minnesota Hospital Association*
Doug Wood, MD Mayo Clinic	*Minnesota Medical Association*
Ann Robinow Andrea Kao *Facilitators*	*Commissioner*

TECHNICAL GROUP MEMBERSHIP

Name / Information	Name / Information
David Knutson Senior Research Fellow University of Minnesota (Facilitator)	Allen Horn, MD, MBA, FACPE President CentraCare Clinic
Robyn Carlson, RHIA, CPHQ Data Quality Specialist Stratis Health	Vicki Kunerth Director, Performance Measurement & Quality Improvement Minnesota Dept. of Human Services
Jim Chase President Minnesota Community Measurement	Boyd Lebow Manager, Healthcare Informatics BlueCross BlueShield of Minnesota
Jon Christianson, Ph.D. Professor University of Minnesota	Kevin Larsen, MD, FACP Chief Medical Informatics Officer Hennepin County Medical Center
Bryan Dowd, Ph.D. Professor University of Minnesota	Andy McCoy Vice President, Revenue Management Fairview
Tina Frontera Sr. Director, Patient Choice & Consumer/Provider Integrated Initiatives Medica	Bill Telleen Vice President, Payer Relations Park Nicollet
Meg Hasbrouck Vice President, Contracting and Reimbursement Allina Hospitals & Clinics	

PROVIDER PEER GROUPING ROADMAP OF ISSUES (REVISED)

MEETING	ISSUE	DESCRIPTION OF ISSUE
Advisory Meeting #1: Thursday, June 11	**Introduction** **Current related activities locally & nationally** **Building blocks for analysis**	Understand the goal of the Advisory Group and how Provider Peer Grouping is currently used in MN and nationally. Understand what data sources will be available to measure cost and quality for MN physicians and hospitals.
Advisory Meeting #2: Friday June 26	**Defining Parameters** • Unit of Analysis • Types of Services to include	Assess what provider level (clinic, medical group, hospital, hospital system, care system) cost and quality can/should be measured that is meaningful and accurate. Evaluate types of services to include (e.g. pharmacy) and exclude (e.g. out of area care, dentists, nursing home care, etc.)
Advisory Meeting #3: Friday July 10	**Selecting Conditions for Peer Grouping** **Defining Parameters for Condition Specific** **Cost Measurement for Condition Specific** • Cost Comparison • Patient Attribution • Risk Adjustment o Severity of Illness o Patient Demographics o Payer Mix • Outlier Issues	Discuss meaning and use of measuring medical conditions for comparison purpose. Recommend how many and which health conditions on which separate cost and quality measures should be reported. Consider how costs will be measured (e.g. total dollars including unit cost & resource use) based on data available. Consider whether a patient using multiple providers for care during a year for a specific condition will be assigned to one or many providers. Examine how to account for the cost differences in medical complexity across providers' patient populations so a provider caring for sicker patients is not adversely impacted. Recommend how to consistently define conditions and the costs associated with them. Evaluate if and how providers' cost measures should be adjusted for patients that are significantly above or below the norm. Review how differing payer mixes, particularly a greater share of government payers, for each provider may impact the cost presentation for consumers and how to make adjustments if needed.
Advisory Meeting #4: Friday July 17	**Quality Measurement for Condition Specific** • Quality Comparison • Patient Attribution • Risk Adjustment o Severity of Illness o Patient Demographics o Payer Mix • Outlier Issues	Evaluate which quality metrics can be measured based on data available and current measures already collected locally and nationally. Discuss how a patient's care received during a year for specific conditions or episodes should be assigned to one or many providers. Recommend how to consistently define conditions and the quality of care associated with those selected medical conditions. Evaluate if and how providers' quality measures should be adjusted for patients that are significantly above or below the norm.

Advisory Meeting #4: Friday July 17	**Cost Measurement for Total Care**
	• Cost Comparison
	• Patient Attribution
	• Risk Adjustment
	  o Severity of Illness
	  o Patient Demographics
	  o Payer Mix
	• Outlier Issues
		Consider how costs will be measured (e.g. total dollars including unit cost & resource use) based on data available. Propose how a patient's care costs for services received during a year will be assigned to provider(s) for a total cost of care perspective. Discuss when patients should not be assigned. Examine how to account for the cost differences in medical complexity across providers' patient populations so a provider caring for sicker patients is not adversely impacted. Evaluate if and how providers' cost measures should be adjusted for patients that are significantly above or below the norm. Review how differing payer mixes, particularly a greater share of government payers, for each provider may impact the cost presentation for consumers and how to make adjustments if needed.

Advisory Meeting #5: Wednesday July 22	**Quality Measurement for Total Care**
	• Quality Comparison
	• Patient Attribution
	• Risk Adjustment
	  o Severity of Illness
	  o Patient Demographics
	  o Payer Mix
	• Outlier Issues
		Evaluate which quality metrics can be measured based on data available and current measures already collected locally and nationally. Discuss how a patient's care received during a year for specific conditions or episodes should be assigned to one or many providers. Recommend how to consistently define conditions and the quality of care associated with those selected medical conditions. Evaluate if and how providers' quality measures should be adjusted for patients that are significantly above or below the norm.

Advisory Meeting #6: Monday July 27	**Combining Cost & Quality**	Consider options on how cost and quality will be combined to peer group providers.
AUGUST BREAK	**Draft Report distributed in mid August**	
Advisory Meeting #7: Wednesday Sept 2	**Combining Cost & Quality** (continued) **Information needs by audience**	Discuss needs of varying audiences (providers, consumers, health plans) for information and data that allow them to make meaningful decisions and actions that lead to improved cost and quality care.
Advisory Meeting #8: Friday Sept 11	**Finalize Outstanding Issues**	Follow up to outstanding issues such as quality weighting, composite measure creation, and data reporting for different audiences.
Advisory Meeting #9: Sept 30	**Review Final Report/Closing**	Discuss Phase II of Provider Peer Grouping. Review final recommendations.