

## **Recommendations: Patient Complexity Tiers for Care Coordination Payment**

### **Summary:**

Combining its work over the past months, the work group recommends a set of patient complexity tiers based on the number of Major Aggregated Diagnosis Groups (ADGs): high-impact conditions that have high severity, high diagnostic certainty, and high likelihood of requiring specialty care. The payment rates associated with these tiers will include a defined-percentage rate increase for patients whose primary language is non-English and for patients with a major, active mental health condition.

### **Tiers Based on Number of “Major” Conditions:**

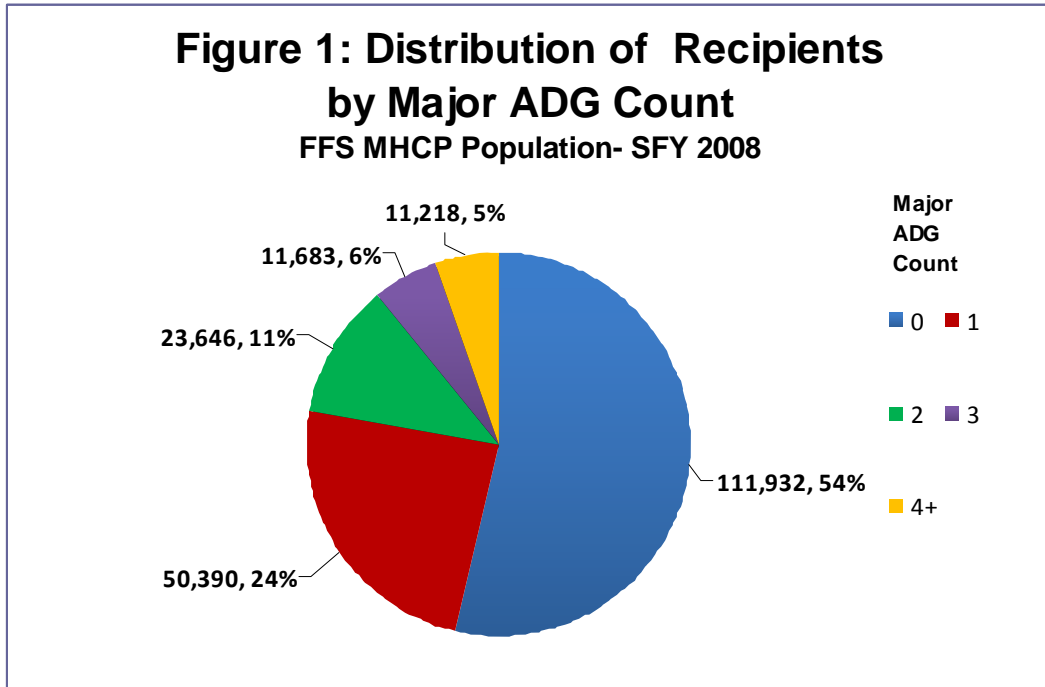
The work group agreed on the use of Aggregated Diagnosis Groups (ADGs) as the basis for the complexity tiers. ADGs are a part of the ACG risk adjustment output, and represent mutually exclusive groupings of ICD-9 diagnosis codes that are similar in terms of their clinical impact and demand on services. Developed by Barbara Starfield at Johns Hopkins University with a primary care patient management focus, ADGs provide a way to identify patients based on the number of co-morbid conditions while also focusing on those “high impact” conditions that are most associated with complexity and care coordination need.

The complexity model developed with the work group’s input is based on the patient’s number of *major* ADGs: a subset of ADGs that are defined as having high severity, high diagnostic certainty, and high likelihood of requiring specialty care. For example, some ICD-9 codes for hypertension (such as 401.0: Malignant Hypertension) map to a major ADG, while others do not (such as 401: common Essential Hypertension). These clinical traits match closely with the work group’s conceptual recommendations of criteria for identifying “high impact” conditions rather than simply counting all chronic conditions. Supplemental information on ADGs is attached in APPENDIX A.

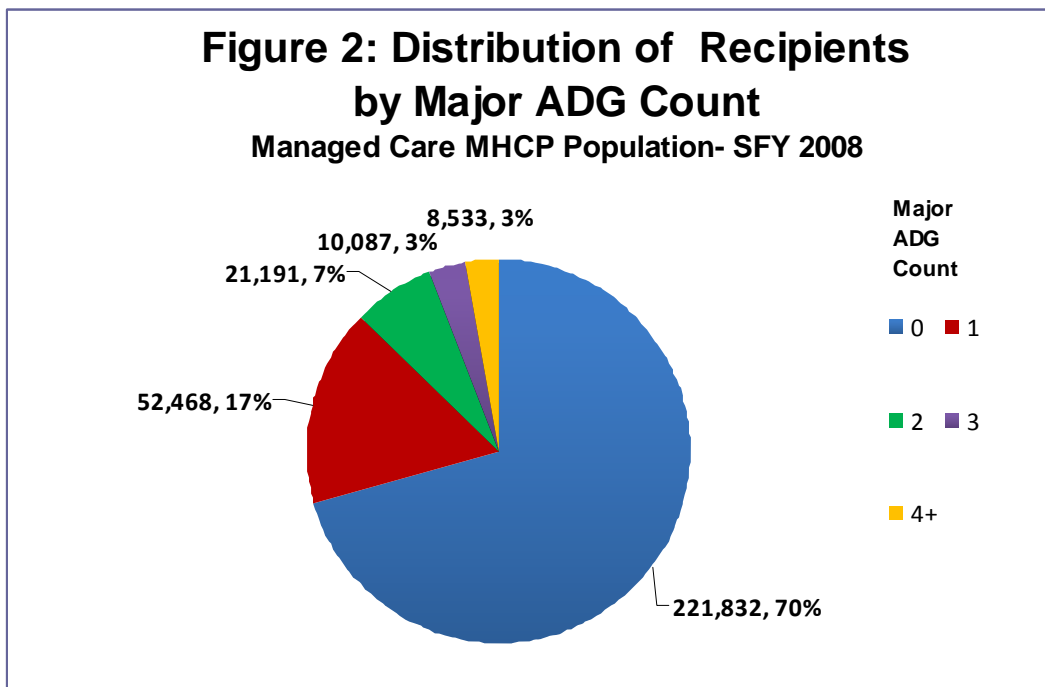
To build a set of workable complexity tiers based on the count of major ADGs, the counts must produce logical break-points in terms of both numbers of patients and resource utilization within each tier. The decision to set the top tier at 4 or more major ADGs reflects the finite capability of Health Care Homes to coordinate care; sub-stratifying within the top 3-5% of most complex patients was not seen as helpful in terms of the amount and intensity of services delivered. Using DHS fee-for-service claims data (and comparisons with public program enrollees in managed care where possible), the following tiers were produced:

- Tier “Zero”: No Major ADGs**
- Tier One: 1 Major ADGs**
- Tier Two: 2 Major ADGs**
- Tier Three: 3 Major ADGs**
- Tier Four: 4+ Major ADGs**

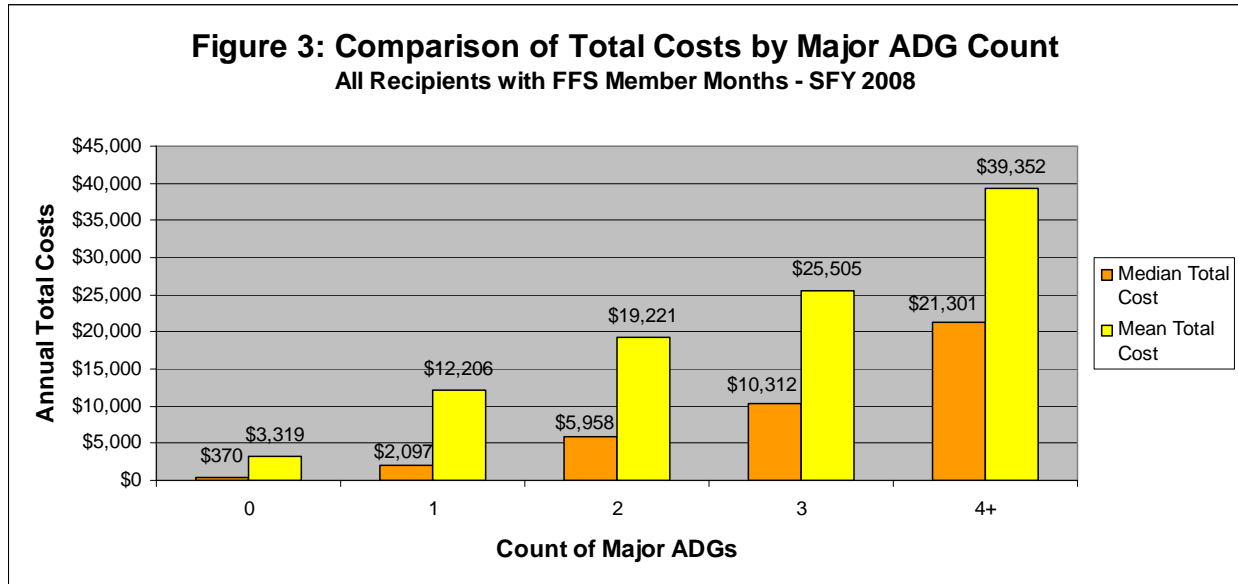
Figure 1 below illustrates the distribution of fee-for-service Minnesota Public Health Care Programs (MHCP) enrollees across the complexity tiers in state fiscal year (SFY) 2008.



For comparison purposes, Figure 2 below illustrates the same distribution for MHCP recipients enrolled in a health plan. As a whole, this managed care population has a lower disease burden than the fee-for-service population.



Although the recipients with one or more major ADGs represent 30-45% of these populations, they account for the vast majority of costs. This is illustrated in *Figure 3*, which shows the mean and median total costs (including medical, pharmacy, and long-term care) for the complexity tiers in the fee-for-service MHCP population.<sup>1</sup>



### **Inclusion of Non-Medical Factors**

The work group considered and evaluated a wide range of non-medical factors, and identified six factors as particularly important in predicting an individual’s care coordination need: readiness to change/engage in care, primary language, mental/behavioral health condition, access to communication tools, social support, and employment/education. Ultimately two factors were chosen as an important starting place in the inclusion of non-medical factors in the payment models because they are present in current administrative data and can be verified. However, the work group strongly indicated that work continue on developing and researching the more comprehensive use of non-medical factors, such as piloting the use of a scoring tool that measures additional factors.

The two non-medical complexity factors included in the initial model given their value in predicting care coordination need and their presence in DHS administrative data for validation are **primary language other than English, and major active mental health conditions**. There is a paucity of data showing precisely to what degree these factors impact care coordination time and effort, yet the work group felt that they should be accounted for in the care coordination payment rates. As *Figure 3* above illustrates, the median cost of each tier increases in a non-linear manner. Thus, allowing these non-medical factors to “bump” a patient into the next tier

<sup>1</sup> NOTE: In computing costs, recipients with zero costs (non-users) were excluded to avoid skewing the values within each tier.

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may over-value their contribution to complexity relative to medical conditions. For these reasons, it is recommended that **each of these two factors triggers a defined percentage increase in the rate for each tier.**

It will be important for “major mental health condition” to be clearly defined so that only major, active mental health diagnoses are identified and included for rate increases. The patient registration and payment processes will need to include a mechanism for these two non-medical factors to be conveyed for payment purposes (such as the use of dedicated V-codes in the diagnosis field of a claims form or the use of procedure code modifiers).

**Additional Justification/Considerations:**

- It is important to remember that the models presented here are intended to group patients together into like complexity groups, and to predict how providers will enroll patients. The tiers need to be understandable and able to be implemented at the clinic level, including clear information about which conditions or diagnoses constitute major ADGs. Tools can be developed to support this, such as a free downloadable Excel program that will “translate” an ICD-9 problem list into the type and number of ADGs for tier assignment.
- Basing the model on major ADGs provides a uniform way for payers to audit providers’ patient complexity assessment against their own administrative data, since all participating payers use ACG software currently. Keeping the transmission of the non-medical factors separate from the actual tier assignment preserves this audit ability.
- The work group strongly supported better data sharing between payers and providers to get a more complete picture of patient complexity. Payers’ claims data can be a useful starting point for clinics, and clinic systems are often more complete than claims history regarding patient complexity. There are considerable opportunities to exchange these data across systems and silos.

**APPENDIX A: Supplemental ADG Materials**

(Major ADGs highlighted in yellow.)

**Table 1: Duration, Severity, Etiology, and Certainty of the Adjusted Diagnosis Groups (ADGs)**

Note: ADGs 15 and 19 are no longer used.

ADG	Duration	Severity	Etiology	Diagnostic Certainty	Expected Need for Specialty Care
1. Time Limited: Minor	Acute	Low	Medical, non-infectious	High	Unlikely
2. Time Limited: Minor-Primary Infections	Acute	Low	Medical, infectious	High	Unlikely
3. Time Limited: Major	Acute	High	Medical, non-infectious	High	Likely
4. Time Limited: Major-Primary Infections	Acute	High	Medical, infectious	High	Likely
5. Allergies	Recurrent	Low	Allergy	High	Possibly
6. Asthma	Recurrent or Chronic	Low	Mixed	High	Possibly
7. Likely to Recur: Discrete	Recurrent	Low	Medical, non-infectious	High	Unlikely
8. Likely to Recur: Discrete-Infections	Recurrent	Low	Medical, infectious	High	Unlikely
9. Likely to Recur: Progressive	Recurrent	High	Medical, non-infectious	High	Likely
10. Chronic Medical: Stable	Chronic	Low	Medical, non-infectious	High	Unlikely
11. Chronic Medical: Unstable	Chronic	High	Medical, non-infectious	High	Likely
12. Chronic Specialty: Stable-Orthopedic	Chronic	Low	Anatomic/Musculoskeletal	High	Likely: orthopedics
13. Chronic Specialty: Stable-Ear, Nose, Throat	Chronic	Low	Anatomic/Ears, Nose, Throat	High	Likely: ENT
14. Chronic Specialty: Stable-Ophthalmology	Chronic	Low	Anatomic/Eye	High	Likely: ophthalmology
16. Chronic Specialty: Unstable-Orthopedics	Chronic	High	Anatomic/Musculoskeletal	High	Likely: orthopedics
17. Chronic Specialty: Unstable-Ear, Nose, Throat	Chronic	High	Anatomic/Ears, Nose, Throat	High	Likely: ENT
18. Chronic Specialty: Unstable-Ophthalmology	Chronic	High	Anatomic/Eye	High	Likely: ophthalmology
20. Dermatologic	Acute, recurrent	Low to High	Mixed	High	Likely: dermatology
21. Injuries/Adverse Effects: Minor	Acute	Low	Injury	High	Unlikely
22. Injuries/Adverse Effects: Major	Acute	High	Injury	High	Likely
23. Psychosocial: Time Limited, Minor	Acute	Low	Psychosocial	High	Unlikely
24. Psychosocial: Recurrent or Chronic, Stable	Recurrent or Chronic	Low	Psychosocial	High	Likely: mental health
25. Psychosocial: Recurrent or Persistent, Unstable	Recurrent or Chronic	High	Psychosocial	High	Likely: mental health
26. Signs/Symptoms: Minor	Uncertain	Low	Mixed	Low	Unlikely
27. Signs/Symptoms: Uncertain	Uncertain	Uncertain	Mixed	Low	Uncertain
28. Signs/Symptoms: Major	Uncertain	High	Mixed	Low	Likely
29. Discretionary	Acute	Low or High	Anatomic	High	Likely: surgical specialties
30. See and Reassure	Acute	Low	Anatomic	High	Unlikely
31. Prevention/Administrative	N/A	N/A	N/A	N/A	Unlikely
32. Malignancy	Chronic	High	Neoplastic	High	Likely: oncology
33. Pregnancy	Acute	Low	Pregnancy	High	Likely: obstetrics
34. Dental	Acute, recurrent, chronic	Low to High	Mixed	High	Likely: dental

## Relationship between ADGs and Diagnoses

The following discussion and examples show how ICD codes within related diagnostic classes are assigned to ADGs. This section also describes the complementary relationship between disease-specific approaches to diagnosis classification and the ADG classification approach.

### Hypertension

Several diagnosis codes can be used to indicate the management of hypertension (reference [Table 2](#)). Common essential hypertension is a stable, chronic disease that is unlikely to require specialty care. Therefore, it is assigned to ADG-10, Chronic Medical: Stable. Malignant hypertensive heart disease is an unstable chronic disease that is likely to be associated with acute complications and a high level of resource use; it is therefore assigned to ADG-11, Chronic Medical, Unstable. Additional ICD codes are used for complications of hypertension. Malignant hypertension is an acute medical complication, has a high severity level, and may involve specialty care; it is assigned to ADG-03, Time-Limited, Major: Non-infectious. Two severe and possibly recurrent complications of malignant hypertension are congestive heart failure and renal failure. These end-organ manifestations of hypertension are indicative of significant progressive clinical instability, high severity, and the need for intensive medical management; as such, they are both assigned to ADG-09, Likely to Recur: Progressive. Elevated blood pressure is a sign that does not necessarily imply a diagnosis of hypertension; thus, it is assigned to ADG-27, Signs/Symptoms, Uncertain.

**Table 2: Hypertension ICD-9-CM Codes and Their Respective ADGs**

ICD-9-CM		ADG	
Code	Label	Code	Label
401	Essential Hypertension	10	Chronic Medical: Stable
402.0	Malignant Hypertensive Heart Disease	11*	Chronic Medical: Unstable
401.0	Malignant Hypertension	03*	Time Limited: Major
402.01	Malignant Hypertensive Heart Disease With Congestive Heart Failure	09*	Likely to Recur: Progressive
403.01	Malignant Hypertensive Renal Disease With Congestive Renal Failure	09*	Likely to Recur: Progressive
796.2	Elevated Blood Pressure Without Hypertension	27	Signs/Symptoms Uncertain

**Note:** The asterisks in [Table 2](#) indicate the following information:

- Major ADG, all ages
- These ADGs are considered major. The major ADG designation is used for ADGs with very high expected resource consumption.

## **APPENDIX B: Work Group Recommendations - Care Coordination Tasks/Functions to be Considered in MHCP Rate Development**

### **Summary:**

At its 8/5/09 meeting, the work group reviewed and discussed key literature on the tasks carried out in performing care coordination and the amount and distribution of staff time needed. Using the available literature, a summary of the draft certification standards for health care homes in MN, and their own experience, the work group recommended that the following tasks and functions, when not currently reimbursed, be considered in the development of per-person care coordination payments to certified health care homes.

### **Task/Function List:**

*(Items marked with a “★” were identified as likely to require considerably more time and resources for more complex patients.)*

- ★ Telephone and e-communication
  - with patients
  - with caregivers
- Visit time not currently reimbursable (scheduling blocks to meet access requirements for health care home certification)
- Establishing patient/family partnerships, recruitment/outreach, education (including enrollment and ongoing engagement) as required for health care home certification
- Travel for care that must take place outside of the usual clinic location, e.g. house calls for home bound frail elderly
- Registry and panel management
  - “triggers” for care
  - provider decision support
- Patient-centered care: tools, resources and time necessary to ensure that decision-making and care are consistent with patients’ culture, values, and preferences
- Coverage and insurance coordination, including time spent filling out forms and documents required for coverage.
- Pre-visit planning
- Family conferences
- ★ Care team conferences

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- ★ Transition planning and management
- ★ Medication reconciliation
- Behavior change coaching
- ★ Care planning
  - integration of specialty care
  - coordination with community resources
- Initial and periodic risk screening
- Measurement, analysis and submission of quality indicators as required for health care home certification
- Learning collaborative participation as required for health care home certification

**General Considerations:**

The work group recommended that the following overarching issues be taken into consideration in the development of care coordination rates.

- 1) *Fixed Costs.* The work group recognized there are two main categories of fixed costs related to operating a health care home: start-up costs and maintenance fixed costs. Examples of these include the time and resources to develop a patient registry, and the ongoing costs of keeping the software current and maintaining the tools. The work group recommended that specific strategies be developed to address these fixed costs and that they be considered in the development of the care coordination rates.
- 2) *Overlap with Currently Reimbursed Services.* The work group recognized that the task/function list above contains a number of items that may already be separately coded and reimbursed in current fee-for-service arrangements. The work group recommended that the care coordination rates reflect only those services listed above that are not reimbursed separately elsewhere. Examples of services with dedicated CPT codes with potential to overlap with the care coordination tasks/functions include:
  - a. Medical Team Conferences (99363, 99364)
  - b. Care Plan Oversight (99339, 99340, 99374-99380)
  - c. Telephone Services (99441-99443, 98966-98968)
  - d. On-Line Medical Evaluation (99444, 98969)
  - e. Education and Training for Patient Self-Management (98960-98962, 99078)
  - f. Review of Data/Preparation of Special Reports (99080, 99090, 99091)