

Original Research

# CME Background CME Background CME Background

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## **CME Objective**

After studying this article, you should be able to:

 Take steps to improve coordination of medical and psychiatric care for patients with severe mental illness (eg, those taking second-generation antipsychotics who need metabolic monitoring)

## **Accreditation Statement**





## **Credit Designation**

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## **Release, Expiration, and Review Dates**

This educational activity was published in August 2019 and is eligible for AMA PRA Category 1 Credit<sup>™</sup> through August 31, 2021. The latest review of this material was August 2019.

## **Financial Disclosure**

All individuals in a position to influence the content of this activity were asked to complete a statement regarding all relevant personal financial relationships between themselves or their spouse/partner and any commercial interest. The CME Institute has resolved any conflicts of interest that were identified. In the past year, Larry Culpepper, MD, MPH, Editor in Chief, has been a consultant for Alkermes, Harmony Biosciences, Merck, Shire, Supernus, and Sunovion. No member of the CME Institute staff reported any relevant personal financial relationships. Faculty financial disclosure appears at the end of the article. and Primary Care to Improve **Medication Monitoring and Outcomes for Patients With Mental Illness Taking** Second-Generation Antipsychotics— HDC/DFMC Bridge Project, Phase 1: **Group Concept Mapping** 

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## ABSTRACT

Objective: Patients with severe mental illness often lack care coordination between primary care and mental health providers. Siloed patient care across separate health care systems can negatively impact quality and safety of patient care. The purpose of the project discussed in this article is to effectively engage stakeholders from separate primary care and mental health organizations to develop an ideal cross-organization communication system to improve metabolic monitoring for their comanaged patients prescribed second-generation antipsychotics (SGAs).

Methods: The mixed method approach of group concept mapping was used to engage stakeholders across a nonaffiliated primary care clinic and a community mental health organization over the time period of March 2018 through May 2018.

**Results:** Three important domains in communication were identified: (1) process/workflow, (2) advocacy, and (3) a patient-centered focus. Seven high priority/easier to implement brainstormed items were identified and resulted in practice changes across both organizations, including developing a standard release of information, identifying a point person from each clinic focused on cross-organization care coordination, endorsing an SGA monitoring protocol across organizations, agreeing that metabolic monitoring of SGAs will be the responsibility of the primary care clinicians, beginning monthly medication reconciliation and cross-organization care conferences, developing standard electronic health record documentation, and providing education.

Conclusions: Care coordination across all health systems is critical to optimize patient care for chronic medical and psychiatric conditions. Group concept mapping provides a strategic process to allow shared decision-making among stakeholders to take steps toward solving more complex systematic problems such as poor electronic health record interoperability across health systems.

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## **Clinical Points**

- Care coordination across all health systems is critical to optimize patient care for chronic medical and psychiatric conditions.
- Group concept mapping provides a strategic process that guides action toward solving complex systematic problems that negatively impact clinical outcomes and inhibit patient centered care.
- An optimal communication process/workflow is essential to improve metabolic monitoring for comanaged patients prescribed second-generation antipsychotics.

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atients with severe mental illness (SMI) often lack care coordination between primary care and mental health providers. Health disparity and stigma related to SMI also contribute to suboptimal patient care in this population.<sup>1,2</sup> Providing patient-centered care across separate health care systems, especially behavioral health, can be challenging for clinicians and can negatively impact quality and safety of patient care.

Often, medical/medication errors stem from systematic communication barriers, such as lack of shared electronic health records (EHRs) and release of medical information.<sup>3–8</sup> This lack of coordination is a missed opportunity to address and prevent serious medical and/or medication-related consequences.<sup>9-16</sup> For example, diabetes mellitus is 2 to 3 times more common in patients with SMI and is associated with higher rates of morbidity (eg, metabolic and micro/ macrovascular complications) and mortality compared to the general population.<sup>17</sup> However, patients with SMI and diabetes are less likely to receive standard of care, and recommended screening for metabolic complications continues to be inadequate.<sup>18</sup> Furthermore, compared to older antipsychotics, second-generation antipsychotics (SGAs) such as risperidone, olanzapine, and quetiapine prescribed for patients with SMI have a greater risk of weight gain, diabetes, and dyslipidemia.17

Metabolic monitoring guidelines for patients treated with SGAs were established in 2004,19,20 but significant barriers to SGA monitoring continue to exist.<sup>21-24</sup> Barriers include prescriber lack of knowledge, lack of confidence, or confusion regarding monitoring guidelines, interpretation of laboratory results, and initiation of treatment.<sup>17</sup> Additionally, delineation of responsibility for metabolic monitoring of SGAs is often not coordinated among prescribers practicing negative patient outcomes.<sup>21,23–25</sup>

Integrated population health management approaches such as behavioral health homes<sup>26,27</sup> and evidence-based behavioral health integration in primary care<sup>10,28-31</sup> have identified and demonstrated improved outcomes including reduced depressive disorder severity, increased care services utilization, and diabetes monitoring (eg, glycated hemoglobin  $A_{1c}$ ) in patients with SMI treated with antipsychotic agents. However, barriers to providing this integrated care across separate behavioral health and primary care systems include lack of formal partnerships, separate EHRs,<sup>31</sup> inability to integrate patient information (eg, mental health comorbidities and care plans) from two separate EHRs, and time constraints on EHR training and utilization for staff and providers.<sup>31</sup> Given the EHR's central role in care team communication, lack of a shared EHR requires organizations to find alternate routes to collaborate to care for comanaged patients.

Local recognition of this lack of communication and care coordination between primary care and community mental health services has led to discussions about how to improve care delivery across organizations in pursuit of the triple aim.<sup>32</sup> A retrospective EHR review at a primary care clinic, conducted by the authors as they undertook this project, identified 51 comanaged patients between primary care and community mental health services who were prescribed SGAs during the 18-month window of October 1, 2016–April 1, 2018. This review revealed 57.1% of patients with diabetes mellitus and 27% without diabetes mellitus had appropriate hemoglobin A<sub>1c</sub> monitoring.

The purpose of this project is to effectively engage stakeholders from separate primary care and community mental health organizations to develop an ideal crossorganization communication system to improve metabolic monitoring for their comanaged patients prescribed SGAs.

## **METHODS**

The mixed method approach of group concept mapping (GCM) was used to engage stakeholders from the Duluth Family Medicine Clinic (DFMC) and Human Development Center (HDC) over the period of March 2018 through May 2018.

## **Patient Care Settings**

HDC is a private, nonprofit, community mental health center that serves residents in 4 counties in northeastern Minnesota and 1 county in northwestern Wisconsin.<sup>33</sup> HDC has 275 employees and includes a psychiatry team consisting of 9 prescribers and a psychiatric pharmacist. HDC serves approximately 8,000 clients per year, offering a full range of outpatient and community-based mental health services using a sliding fee scale.

DFMC is a nonprofit residency training clinic located in Duluth, Minnesota.<sup>34</sup> The University of Minnesota Duluth Family Medicine Residency Program<sup>35</sup> focuses on developing



<sup>a</sup>The small-sized numbers within each cluster represent words or phrases, which are expanded in Supplementary Appendix 3, in response to the focus statement, "To effectively monitor patients taking second-generation antipsychotics, we (HDC and DFMC) need. Abbreviations: DFMC = Duluth Family Medicine Clinic, EHR = electronic health record, HDC = Human Development Center.

and preparing collaborative, rural-ready, full-spectrum family medicine physicians and includes 29 family medicine residents (9 or 10 residents per postgraduate year) under the preceptorship of 7 family medicine, 1 behavioral health, and 2 ambulatory clinical pharmacist faculty members. DFMC has 65 employees that manage a patient panel of 7,000. A full range of medical services is available including laboratory, x-ray, behavioral health, clinical pharmacy, social work, and office-based procedures.

## Group Concept Mapping

Group concept mapping (GCM) is a unique participatory method of data collection that utilizes multidimensional scaling and hierarchical cluster analysis<sup>36</sup> and is relevant for data collection, analysis, planning, and developing conceptual frameworks.<sup>37-41</sup> This research method brings participants together to collectively brainstorm words or phrases in response to a focus statement, individually group the words/ phrases into clusters, and individually rank each word/phrase and cluster. After analysis, participants interpret relationships between the clusters and word/phrases as a group.<sup>36,37</sup> Next, participants selected 7 high priority/easier-to-implement brainstormed items.

The GCM method is useful for better understanding how to bridge the gap between community mental health and primary care because it allows for stakeholders from both groups to come together and contribute their perspectives toward planning and developing an optimal communication system between the two clinics. By using this method, diverse perspectives are incorporated in the planning process, which optimizes stakeholder buy-in. This method also allows for

development of a basic conceptual framework focused on the ideal components that are necessary for communication between primary care and community mental health: information that aids in identifying communication barriers that exist as well as the development of an ideal communication system between the two clinics. Supplementary Appendix 1 provides a detailed description of the GCM process, and Supplementary Appendix 2 provides a visual depiction.

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This study was approved by the Essentia Health Institutional Review Board and was deemed exempt from review by the University of Minnesota Institutional Review Board.

## RESULTS

An interprofessional group of 14 participants across both organizations brainstormed 99 items (Supplementary Appendix 3), which were sorted into a point map with 6 clusters (Figure 1). Items (points) situated close to each other on the map (eg, 11 and 24 in Cluster 2) were sorted together more often by GCM participants, indicating their similarity. Items situated further from each other on the map (eg, 24) and 49) were sorted together less often or never, indicating their dissimilarity. The final stress value was 0.2991 after 16 iterations, which indicates an acceptable fit of the sort data.<sup>42</sup> Each cluster's relative level of priority in the planning process and ease of implementation was determined by the ranking of items. Each cluster was also analyzed based on the relationship between priority and ease of implementation through the use of pattern matching, which allows for a quantitative comparison of cluster ratings (Figure 2).

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Priority **Ease of Implementation** 8.91 7.43 3. Effective inter-clinic communication strategies Standardization of process and protocols Patient-centered care and education 2. EHR optimization Care team member roles & responsibilities, 1. Standardization of process and protocols workflow, and care coordination Effective inter-clinic communication strategies 4. Care team member roles & responsibilities, workflow, and care coordination 6. Patient-centered care and education 2. EHR optimization 5. Patient advocacy and access to behavioral health care 5. Patient advocacy and access to behavioral health care 6.61 4.73 r = 0.78

<sup>a</sup>Values based on ratings of 1 (lowest priority/impossible to implement) to 10 (highest priority/extremely easy to implement). Abbreviation: EHR = electronic health record.

Table 1. Resulting Practice Changes From Priority Items Identified by Both Organizations				
GCM Priority Item <sup>a</sup>	Cluster	Resulting Practice Change		
61. To have agreement on expectations for monitoring	Cluster 4: Care team member roles & responsibilities, workflow, and care coordination	Endorsed a protocol for SGA monitoring across both organizations (Supplementary Appendix 4)		
75. To have a standard protocol for release of information	Cluster 1: Standardization of process and protocols	Standard release of information covers communication between entities about treatment		
87. To have a way to easily see in the EHR which patients are comanaged	Cluster 2: EHR Optimization	DFMC populated the "care team" in their EHR to clarify which patients are comanaged. Established an agreement for HDC clinicians to have "read only" access to DFMC EHR for joint clients		
85. A specific point person to be responsible for ensuring that the checklists and protocols are followed	Cluster 4: Care team member roles & responsibilities, workflow, and care coordination	Both clinics identified a "point person" (registered nurse) to serve as a point person for care coordination		
91. To ensure that the patient's updated/reconciled medication list is generated prior to clinic visit	Cluster 2: EHR Optimization	Pharmacy resident at DFMC will complete medication reconciliation monthly in proximity to monthly care conference		
26. To know which clinic/provider is following up on behavioral health medications	Cluster 4: Care team member roles & responsibilities, workflow, and care coordination	Both organizations agreed that metabolic monitoring of SGAs will be the responsibility of the DFMC clinicians, and clinicians and learners from both sites will begin monthly care conferences together January 2019		
<ol> <li>Education surrounding monitoring for all involved in patient care</li> </ol>	Cluster 6: Patient-centered care and education	Education materials are being developed in 2019		

<sup>a</sup>Represents the 7 highest priority items to implement in response to the focus statement, "To effectively monitor patients taking second-generation antipsychotics, we (HDC and DFMC) need..." (See words and phrases for all items in Supplementary Appendix 3.)

Abbreviations: DFMC = Duluth Family Medicine Clinic, EHR = electronic health record, GCM = group concept mapping, HDC = Human Development Center, SGA = second-generation antipsychotic.

The 6 clusters (Figure 1) represented 3 domains important in a communication system: (1) the process/ workflow, (2) advocacy, and (3) a patient-centered focus. Process/workflow included standardization of process and protocols (Cluster 1), EHR optimization (Cluster 2), effective inter-clinic communication strategies (Cluster 3), and care team member roles and responsibilities, workflow, and care coordination (Cluster 4). Patient advocacy and access to behavioral health care (Cluster 5) represented aspects of advocacy important in ensuring patient access to behavioral health care—components ultimately viewed by participants as essential in the development of an effective cross-organization communication system. Patient-centered care and education (Cluster 6) had a particular focus on the efforts of various providers in collaborating to provide patient-centered care and education.

Participants from both health care systems had similar overall perspectives on the priority and ease of implementation of effective inter-clinic communication strategies (Cluster 3) and EHR optimization (Cluster 2). It is illegial to post this copy Both groups ranked these clusters as high priority in an effective communication system but also ranked them as

some of the most difficult to implement (Figure 2).

Following presentation of the GCM results to participants from both HDC and DFMC, the two organizations independently discussed and came to consensus on the 7 priorities (items) they wanted to focus on in 2018 (Table 1), based on participant perception that these items had the greatest potential to increase the level of coordination between clinics. Participants chose to implement 2 EHRfocused (Cluster 2) items (identification of comanaged patients in the EHR [#87] and updated/reconciled medication list available prior to clinic visit [#91]). Both of these items were ranked as having high priority, but easier to implement than other items in the cluster (Cluster 2 was ranked as one of the most difficult to implement; see Figure 2). Other high priority/easier to implement action items chosen in the process/workflow domain included developing monitoring expectations and responsibilities (#61), a standardized release of information protocol (#75), and the selection of a point person for care coordination (#85). Education surrounding monitoring for all involved in patient care (#16) was selected, as education was deemed critical to any practice change. Implementation of these items resulted in practice changes across both organizations (Table 1).

## DISCUSSION

Use of GCM across separate behavioral health and primary care systems is an innovative approach to facilitate face-to-face care collaboration and was a strength of this project. The GCM method was used to bridge the gap between community mental health and primary care providers because it provided a platform for stakeholders from both groups to come together and contribute their perspectives toward systematically planning and developing an optimal communication system between the two clinics. This opportunity to communicate face-to-face also allowed stakeholders to begin to build relationships important in improving the communication process and workflow, which can ultimately improve patient care.<sup>3–8, 20–23</sup>

Participants viewed the communication process/ workflow as being an essential component of an ideal communication system, as evidenced by the selection of action items. Six of the 7 action items focused on improving process/workflow-based aspects of communication (Domain 1) between the two organizations. For example, given the lack of shared EHR, both groups agreed that identification of a point person at each organization was critical to ensure efficient information sharing. Participants realized there was significant variation in providers' understanding and implementation of metabolic monitoring guidelines. This variation may have been due to variations in provider experience/exposure as well as the existence of multiple guidelines.<sup>43–47</sup> As a result, it was critical to gain consensus on a mutually endorsed guideline (Supplementary Appendix 4) and to educate all team members in order to promote adherence and consistency. In addition, the GCM process facilitated the creation of a workflow for care coordination across sites to ensure appropriate SGA monitoring. The workflow will include monthly clinician care conferences to ensure patients' goals of therapy are met and medication reconciliation to improve the quality, cost, and outcomes of care.<sup>48</sup> Participants are currently developing durable SGA monitoring guideline and workflow educational materials to be delivered in 2019 and as part of regularly scheduled didactics for the clinicians involved in the care of patients taking SGAs across both organizations.

## **Study Limitations**

While the results from this GCM project are useful to the two organizations involved, generalizability to other organizations may not be possible. Future studies that involve larger and more diverse groups of stakeholders may produce a concept map that provides insight on an ideal cross-organization communication system/process in general (not just between two specific organizations). It took organizational and individual stakeholder commitment of 6 hours over a series of 4 meetings, which needs to be considered should another organization choose to use the GCM method. Additionally, there were 4 one-hour meetings for GCM planning and analysis.

## **Future Directions**

Following a year of these interventions, hemoglobin  $A_{1c}$  monitoring will be extracted from the DFMC chart to reveal if appropriate monitoring has improved to the group's bold aim of 100% appropriate monitoring. Future research will determine if standardizing monitoring expectations and protocols between the two clinics will significantly reduce duplication of services and improve patient outcomes.

## CONCLUSION

Care coordination across all health systems is critical to advance and optimize patient care for chronic medical and psychiatric conditions. Group concept mapping provides a strategic process to allow shared decision-making among stakeholders in order to take steps toward solving more complex systematic problems such as poor EHR interoperability across health systems.

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**Disclosure of off-label usage:** The authors have determined that, to the best of their knowledge, no investigational information about pharmaceutical agents that is outside US Food and Drug Administration–approved labeling has been presented in this article.

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**Role of the sponsor:** The sponsor played no role in the design and conduct of the study; collection, management, analysis, and interpretation of data;

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**Previous presentation:** A subset of the manuscript was presented by Ms O'Donnell as a poster at the Annual Meeting of the College of Psychiatric and Neurologic Pharmacists (CPNP); April 7–10, 2019; Salt Lake City, Utah.

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Supplementary material: See accompanying pages.

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Supplementary material follows this article.



# POSTTEST

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- 1. All of the following statements about group concept mapping are true except:
  - a. Stakeholders must reach complete consensus before implementation of new strategies
  - b. The mixed method approach uses multidimensional scaling and hierarchical cluster analysis
  - c. A basic conceptual framework can be developed with a focus on the ideal components
  - d. Diverse perspectives are incorporated in the planning process to optimize stakeholder buy-in
- 2. The 2004 American Diabetes Association consensus guidelines for metabolic monitoring of second-generation antipsychotics designated the responsibility of monitoring to primary care clinicians rather than the prescribing mental health practitioner.
  - a. True
  - b. False
- 3. Your 43-year-old patient, Mr D, arrives for his follow-up visit at your community mental health center. He has schizophrenia but is otherwise healthy. He has been stable since starting a second-generation antipsychotic 12 months ago. Mr D does not recall having had any appointments with his primary care provider in the past year. He has gained 5 kg (11 lb) since his last appointment but denies any changes in diet or exercise. Which of the following choices would *not* be an appropriate next step in Mr D's care?
  - a. Refer Mr D to primary care for a physical examination and metabolic monitoring
  - b. Schedule Mr D for follow-up with the mental health clinic in 6 months; no laboratory tests are needed at this time
  - c. Refer Mr D to his primary care provider with an order for glycated hemoglobin  $\rm A_{1c}$  testing
  - d. Refer Mr D to his primary care provider with an order for glycated hemoglobin A<sub>1c</sub> testing and a fasting lipid panel

# THE PRIMARY CARE COMPANION FOR CNS DISORDERS

# **Supplementary Material**

- Article Title: Bridging Community Mental Health and Primary Care to Improve Medication Monitoring and Outcomes for Patients With Mental Illness Taking Second-Generation Antipsychotics— HDC/DFMC Bridge Project, Phase 1: Group Concept Mapping
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## Appendix 1. Group Concept Mapping Process and Analysis

On par with GCM sample size recommendations (minimum: 10-12), 13 participants were recruited.<sup>1</sup> The inclusion criteria included clinic staff members who played a role in either direct patient care or managed the information documented from patient visits. Participants were encouraged, but not required, to participate in every step of GCM. Concept Systems Global MAX software<sup>2</sup> was used for this GCM project, which took place from March to May 2018.

For step 1, participants brainstormed in response to a focus statement prompt at in-person meetings (two brainstorming sessions were held to allow as many participants to participate as possible). The focus statement was, "To effectively monitor patients taking second generation antipsychotics (SGAs), we (HDC and DFMC) need..." Participants were invited to share as many ideas as possible, and generated a total of 205 statements. Following brainstorming, the GCM facilitator and project leaders combined or reduced statements that were identical or represented the same idea into one representative statement (99 final statements).

For step 2, each participant was given a unique username and password to use for the Concept Systems Global MAX software. The sorting and ranking process was completed by each individual online at their own pace and timing. Each participant individually grouped the 99 statements according to their similarity<sup>3-5</sup> "in a way that makes sense to [the participant]."<sup>6</sup> Participants also ranked the statements according to two prompts: "Rate each idea individually on the level of priority that you think it should be given in the planning process." The ranking of "1" indicated "lowest priority in the planning process" and "10" indicated "highest priority in the planning process." The second prompt was "rate each idea individually on how easy you think it would be to implement." The ranking of "1" indicated "impossible to implement" and "10" indicated "extremely easy to implement. Participants were encouraged to use the full range of the scale ("1" to "10") when ranking the list of statements. The GCM facilitator followed three main steps,<sup>6</sup> to analyze data with the use of Concept Systems Global MAX software: 1. A similarity matrix was created based on sorting data, representing the number of times each pair of statements was sorted together. 2. Using multidimensional sorting, a twodimensional map of points was created, in which each point represented a separate statement<sup>7,8</sup> and a stress value was calculated. 3. Hierarchical cluster analysis was utilized through the use of Ward's algorithm to divide the multidimensional scaling coordinates into clusters.<sup>9</sup>

The facilitator analyzed the ranking data and a mean value for each item was calculated. In addition, a mean value for each cluster was calculated based on the mean values of all items contained within the cluster. The result of these analyses produced a visual concept map representing the focus: what HDC and DFMC need to effectively monitor patients taking second generation antipsychotics (SGAs). Each cluster was also compared based on the relationship between priority and ease of implementation through the use of pattern matching, which allows for a quantitative comparison of cluster ratings. A Pearson product moment correlation coefficient for this relationship was calculated.

Prior to the interpretation meeting, the facilitator, project leaders, and project stakeholders met to share their interpretations of the content of each cluster in the form of titles, representative statements, or phrases. Each cluster was given a preliminary name through this process.

During step 3, which was held in-person, participants interpreted the maps by discussing the content of the clusters as well as the relationship(s) between clusters. They gave feedback on the overall content of the map, the ratings of each cluster, and the potential utility of the results. Participants were also guided through analysis focusing on the relationship between "priority" and "ease of implementation" rankings, with a focus on identifying clusters and statements that received high priority and high ease of implementation ranking. There were 28 items that received high priority and high ease of implementation ranking. At HDC, the medical director and clinical pharmacist most closely involved in the project came to consensus on their top 7 priority items. At DFMC, each participant was asked to pick

their top 5 items of those 28 that they perceived to be the most important. All of their responses were analyzed to find the top common responses among the participants.

All in-person meetings were recorded.

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## Appendix 2. Visual Depiction of Group Concept Mapping (GCM) Process

\*Figures in white were not part of the GCM process, but were part of our process to develop solutions to improving transitions of care across organizations

Cluster 1: Standardization of process and protocols		
Statement	Statement	
#		
1	to know how other clinic manages frequency of follow up	
10	to have a process/protocol for medication reconciliation	
13	one person at each clinic who takes charge of communication/collaboration	
	process between clinics	
20	a prompt to reestablish care with patients who are not current with follow up	
25	to have a protocol for who monitors and follows up on labs	
29	to have a person who is responsible for medication reconciliation	
63	to know how often labs are checked	
75	to have a standard protocol for release of information	
83	automatic protocols that are triggered when specific medications are prescribed	
93	an automatic process that triggers a follow-up visit and monitoring protocol when	
	specific medications are prescribed	
Cluster 2: EHR Optimization		
2	a way to communicate between different EHR systems	
3	to flag prescribers if a medication requires monitoring	
7	to have behavioral health data be reportable from EHR	
8	to be able to look at past medication history	
11	to scan information into the EHR.	
14	to have necessary shared patient information immediately available in the medical	
	record at point of care	
24	medical records to be transferred/shared quickly	
36	to have access to a patient portal so patients can print off and bring their patient	
	portal records to clinic appointments	
38	an easily accessible EHR list/tab that shows the care team providers (e.g. HDC	
	provider, DFMC provider, pharmacy provider, ARMHS worker, etc.)	
44	to ensure that a monitoring checklist from the other clinic is scanned into the EHR.	
48	a tab in the EHR where information relevant to monitoring of SGAs is found	
50	to ensure that the diagnosis codes are easy to find	
52	Epic analyst support to build needed EHR improvements	
67	a way to easily view hospital patient records (including medication lists)	
69	a way to flag prescribers that won't lead to "alert-fatigue"	
70	an efficient way to find pertinent information in the EHR	
77	to have a tab/location for behavioral-health specific information in the EHR.	
80	VPN access to the patient care record in real time	
87	to have a way to easily see in the EHR which patients are co-managed	
88	to have the same medical record system	

# Appendix 3. List of Statements Organized by Cluster

90	to ensure that lab orders are easy to find
91	to ensure that the patient's updated/reconciled medication list is generated prior to
	their clinic visit
Cluster 3:	Effective inter-clinic communication strategies
4	to ensure that patient information is being shared in both directions
12	to communicate about non-mental health health issues
15	to know what kind of information the other clinic needs
18	to clarify who is responsible for ensuring patient information is shared
19	to share medication list updates when they occur
21	a safe/secure way to communicate
27	to know if labs/monitoring has occurred
28	to have a complete medication list for each patient
40	to communicate after each patient encounter
56	to be able to share information face-to-face with other healthcare providers
57	a timely process for sharing patient information
58	to send lab results to both the ordering provider as well as the provider who cares
	for the patient at the other clinic
66	a consent form to allow information to be shared between the two clinics
72	a way to ensure faxes are noticed
76	to request updated medication lists from the other clinic regularly (for medication
	reconciliation)
82	to know which medications each clinic is managing
84	to know if other clinic receives lab data/monitoring information after it is sent
98	to know which medications each clinic is prescribing
Cluster 4:	Care team member roles & responsibilities, workflow, and care coordination
23	to know who is responsible for monitoring and following up on labs
26	to know which clinic/provider is following up on behavioral health meds
30	to know if a patient was admitted to the hospital
33	shared personnel (people who work at both clinics)
34	a point person at DFMC to be a person on the HDC patient team
35	to determine it patients have a case manager/ARMHS/ACT person at HDC
41	a workflow so staff know what to do with patient information
42	an automatic process that triggers a referral for case management when specific
47	medications are prescribed
47	an automatic process that triggers a referral for health coaching/dietician when
	specific medications are prescribed
61	to nave agreement on expectations for monitoring
62	Interaction between both clinic's case management
/1	to meet the prescribers at the other clinic
/4	prescribers to know when they should feel empowered to make medication
	changes (and when to deter to other prescribers)

78	mental health providers, ARMHS workers, and primary care to be located in the
	same place
85	a specific point person to be responsible for ensuring that the checklists and
	protocols are followed
89	an understanding of who "owns" which pieces of a patient's care (to have
	agreement on ownership of patient care between primary care and behavioral
	health)
94	to know baseline labs
96	to know which patients have case management
97	to know the scope of practice/strengths of each clinic so we can provide
	complimentary (not duplicative) care
Cluster 5:	Patient advocacy and access to behavioral health care
5	to know the financial impact of collaboration between clinics
9	to involve national patient advocate organizations in lobbying for change at
	state/federal level to integrate healthcare to improve patient care
17	consumers (patients) to advocate for change in the healthcare system
45	to acknowledge the social determinants of health for this population
46	a way to bill for reimbursement for not currently reimbursable providers (e.g. RNs,
	RPhs)
51	to help patients get health insurance
55	to petition city council to mandate that organizations that provide healthcare in
	Duluth have a shared medical record
59	to reduce stigma for patients
60	an integrated health care system
68	funding for community mental health centers for comprehensive psychiatric care in
	non-metro areas
81	grassroots efforts to advocate for an integrated EHR.
92	adequate funding for coordination activities
Cluster 6:	Patient-centered care and education
6	case managers to let patients know that they need to get lab work done
16	education surrounding monitoring for all involved in patient care
22	to meet monthly/quarterly with the patient's care team (which can include
	community services/law enforcement/ARMHS/social workers, birch tree, etc. as
	well as healthcare people)
31	to provide health coaching
32	to have a "check out sheet" to give patients that covers referrals, follow-up
	instructions, upcoming visits, education, etc.
37	to know which shared patients are in the CHUM Community Intervention Group
39	to educate patients about follow up monitoring
43	to explore ways to contact patients who are not reachable by phone
49	to have knowledge of how to access community services designed to improve

	adherence (e.g. pharmacy bubble packs)
53	to keep the patient in the center
54	to have pharmacists provide patient education in clinic
64	to educate patients about risk
65	to identify other people who might be involved in patient care (e.g. ARMHS
	workers)
73	to ensure patients are regularly followed up on
79	to include ARMHS workers in contacting patients
86	ARMHS workers to assist in getting patients to appointments
95	to ensure the patient has a voice/ownership in their care
99	to identify unmet patient needs that the other clinic could address

# Appendix 4. Endorsed Second-generation Antipsychotic Metabolic Monitoring Protocol: A1C/fasting glucose and fasting lipid panel (FLP) monitoring

## A1c / fasting glucose:

- Baseline, at 3 months in the first year
- If no pre-diabetes or diabetes (DM) or significant risk factors (e.g. weight gain >5%) then annually
- If pre-DM or DM or significant risk factors (e.g. weight gain >5%) then per American Diabetes Association (ADA) standards – If pre-DM or significant risk factors = annually (ADA states annually if on SGA). If DM = every 6 months if at goal and every 3 months if not at goal.<sup>44</sup>

## FLP:

- Baseline, if start treatment, then per the American College of Cardiology/American Heart Association guidelines (4-12 weeks after initiation of statin)<sup>47</sup>
- Annually (most variable amongst resources) supported by HEDIS, Stahl's, ACC/AHA45-47