

A Fairview Clinic Medication Therapy Management Business Plan

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The following business plan was completed for an actual practice site during a residency learning experience and is being presented as one example for other practitioners to consider when creating their own Comprehensive Medication Management (CMM) business plan. For the purpose of this business plan, the term Medication Therapy Management (MTM) is used synonymously with CMM. This business plan is not intended to be used as a template, but rather as a guide when planning aspects of practice development, defining various functions within the practice and garnering support from stakeholders. Clinic-specific and contract information from this practice has been removed from the business plan. Additionally, the appendices have been removed as each practitioner should consider their own site-specific needs when developing such materials. Lastly, it is important that practitioners consider their own organization's priorities and baseline understanding of CMM when developing and refining a practice-specific business plan.

Table of Contents

<u>Section</u>	<u>page number</u>
I: Program Description	2
A. Practice Location	
B. Service Definition	
C. Value	
II: Market Overview	8
A. Attitudes and Beliefs	
B. Quality Measures	
III: Infrastructure Resources	9
A. Exam Room	
B. Appointments	
C. Support Staff	
D. Communication and Documentation	
IV: Collaboration and Communication with Healthcare Providers	11
A. Methods for Communication	
B. Referrals	
C. Interprofessional Team Meetings	
D. Optimizing Medications	
V: Billing Plan, Revenue and Expenses	13
A. Payor Categories	
B. Billing Strategies	
C. Claims	
D. Revenues and Expenses	
VI: Marketing	16
A. Marketing to Patients	
B. Marketing to Clinic Staff	
C. Marketing to other Providers	
VII: Maintaining the Practice	17
A. Continuous Professional Development: Short-term	
B. Continuous Professional Development: Long-term	
C. Continuous Quality Improvement	
D. Maintaining Patient Care:	
VIII: References	19

Section I: Program Description

A. Practice Location:

1. Physical location:

- *[Clinic name], [address].*
- Medication Therapy Management (MTM) services are located within the Family Practice Clinic.

2. Patient Accommodations:

- The large clinic has 60 patient care rooms and 35,674 sq. ft.
- The space accommodates patients with a large shared lobby waiting area and extended parking lot with two-level parking ramp.

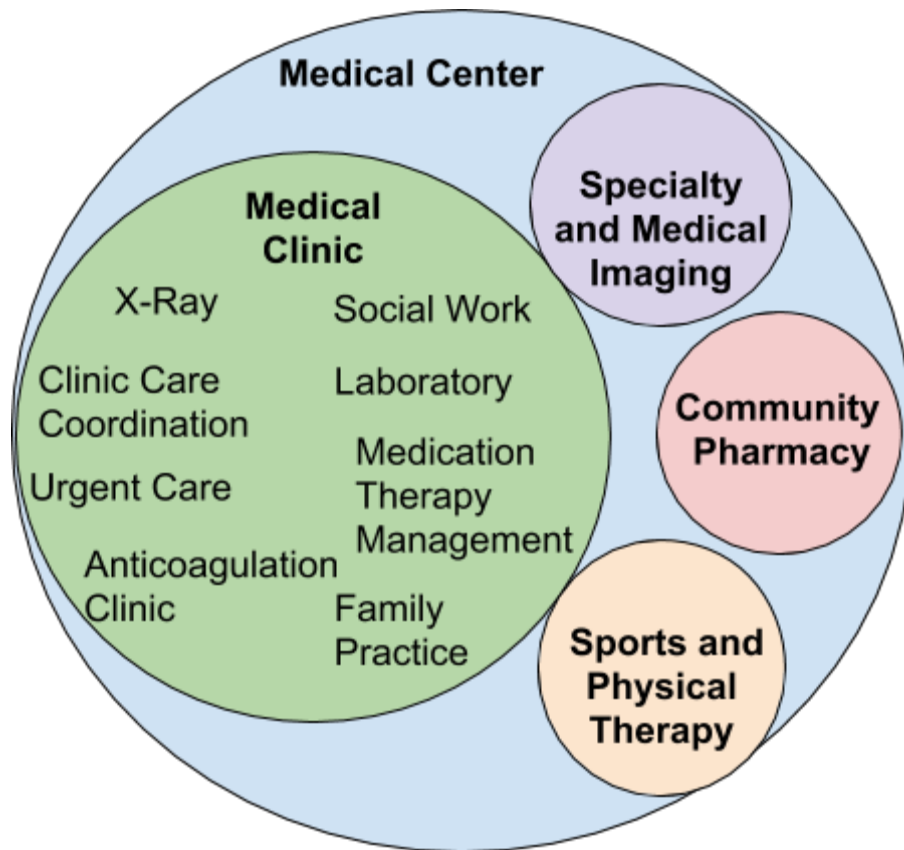
3. Family Practice:

Clinic Report		
Primary Care Providers	# of providers = 14	FTEs = 13.8
MD	8	8
DO	2	2
NP	1	1
PA	3	2.8
Unique Patients	Approx 28,000	
Shared Savings Patients*	X patients (X% of total pts)	
Total # of PCP visits/year	50,563 visits	

*Shared savings designates patients for which the network may increase reimbursement by improving health outcomes and decreasing total cost of care.

4. Multidisciplinary Services:

- *[Clinic name]* is a multidisciplinary medical facility. MTM is complementary to the other services offered and unique to the clinic.
See figure below.



B. Service Definition:

- The Medication Therapy Management (MTM) program through Fairview Pharmacy Services (FPS) delivers Comprehensive Medication Management (CMM) directly to patients by a licensed pharmacist. The intention of the service is to improve patient’s overall health, optimize safe and effective medication use, and assist patients in meeting their health care or medication cost goals.¹⁻²
- The pharmacist patient care process includes: collecting the necessary medical and patient specific information, assessing the specific patient, co-creating a plan, implementation of the plan and continued follow-up with the patient until the goals of therapy are reached.
 - The MTM pharmacist sees patients one-on-one in clinic visits. The pharmacist identifies areas for optimization in patients’ medications including:
 - Is the dose too low? Is the dose too high?
 - Is there a more cost effective medication available?
 - Does the patient understand how to use the medication safely?
 - Is there an interaction with another medication?
 - Next, the pharmacist works in collaboration with the patient and other health care providers to resolve these drug therapy problems, optimizing outcomes for the patient.

C. Value:

- Within the literature, MTM achieves the quadruple aim by improving clinical outcomes, lower healthcare costs, improve patient experience and improve clinician experience.⁸

Medication Therapy Management (MTM) Achieves the Quadruple Aim	
<p>1. Improved Clinical Outcomes</p> <p>MTM v. non-MTM patients achieving health goals: Htn: 71% v 59% Chol: 52% v. 30%⁷</p> <p>Patients receiving MTM were more likely to achieve A1c goal at one year OR 2.48.¹⁶</p> <p>Overall improvement in 55% of the medical conditions with MTM.⁶</p>	<p>3. Improved Patient Experience</p> <p>After MTM services 100% of patients strongly agree that “After talking with my clinical pharmacist, I feel more confident to manage my medicines.”</p>
<p>2. Lower Healthcare Cost</p> <p>Return on investment of \$12.15 per \$1 in MTM costs.⁷</p> <p>Patients who received MTM service within 30 days of hospitalization had lower rate of 30-day readmission (8.6% v. 12.8% p<0.001).¹⁷</p>	<p>4. Improved Clinician Experience</p> <p>I like the “teamwork” mindset that the PharmD service brings to the clinic for the providers.</p> <p>I like having another resource for patients to receive more education about their meds.</p>

1. Improved Clinical Outcomes

A retrospective study titled *Medication therapy management: 10 years of experience in a large integrated health care system* showed the clinical benefit of medication therapy management (MTM), delivered by pharmacists. Fairview pharmacists delivered care to more than 9,000 patients over 10 years in more than 33,000 encounters. Clinical outcomes showed overall improvement in 55% of the medical conditions for the patient population after MTM services. Twenty-three percent of the population had no change in condition control and 22% worsened.⁶

Another study by Isetts and colleagues titled *Clinical and Economic Outcomes of Medication Therapy Management Services: The Minnesota Experience* also demonstrated clinical benefits of MTM services. Patients with one or more select medical condition(s) and at least two health claims in a five month period were enrolled to either receive MTM services through Fairview or to not receive MTM services. The group receiving MTM services amounted to 285 patients. Clinical improvements for the MTM group exceeded that of the control group for both hypertension and cholesterol management with 71% v. 59% achieving goal for hypertension and 52% v. 30% for achievement of cholesterol treatment goal. Not only are these clinical outcomes beneficial to patients' overall health, but these clinical outcomes directly tied to quality are increasingly key as the landscape of healthcare continually shifts towards pay for performance.⁷

The study *Optimal Diabetes Care Outcomes Following Face-to-Face Medication Therapy Management Services* demonstrates the significant positive impact that pharmacist-delivered MTM services can make on optimal diabetes measures for patients. Over the course of three years, patients with diabetes who used MTM services were compared with patients who were offered MTM services, but opted out. Optimal diabetes measures assessed included HbA1c<7%, low-density lipoprotein (<100 mg/dL), blood pressure (<130/80 mmHg), tobacco-free and daily aspirin use. At baseline, patients who utilized MTM services were of higher complexity. Outcomes of the study measured the effect of one year of MTM service. After one year of MTM service, the percent of patients who met criteria for optimally managed was significantly higher (21.49% v. 45.45%, P<0.01). A nonlinear multivariate difference in difference (DID) estimation demonstrated that patients receiving MTM services were more likely to meet HgbA1c goals after one year (OR 2.48, 95% CI 1.04-5.85 P=0.038).¹⁶

Another study titled, *Description of pharmacist-led quality improvement huddles in the patient-centered medical home model* demonstrates the value of quality huddles led by a pharmacist in improving compliance with the asthma action plan both improving the quality metric and improving patient education tied to patient care.¹⁸

2. Lower Healthcare Cost

Economically, MTM services have been proven to decrease the total cost of care. As demonstrated in the study previously named by Isetts and colleagues, the reduction of total annual health expenditure for those patients that were engaged in MTM services exceeded the cost of providing MTM services by more than 12 to one. The reduction in total annual health expenditures per person per year was \$3,678. The total cost of MTM services was \$266.08 per person for one year.³⁻⁷

Fairview MTM services have also demonstrated a significant impact on the rate of readmissions. In the study titled *Impact of Comprehensive Medication Management on*

Hospital Readmission Rates, a retrospective analysis of electronic medical records reviewed 30 and 60 day readmission rates for 43,711 patients comprising 57,673 hospitalizations. A CMM cohort, patients who were seen for comprehensive medication management within 30 days, was compared with a non-CMM cohort. Results demonstrated a significantly lower rate of 30-day readmission (8.6% v. 12.8% p<0.001). The 60-day readmission rate was lower among CMM participants (15.6% vs. 17.6% p=0.0528).¹⁷

3. Improved Patient Experience

Fairview MTM patient experience data demonstrates that patients are satisfied with the level and quality of care provided by their MTM Pharmacist.

MTM Selected Survey Data:

Survey Question	% patients strongly agree + agree
After talking with my clinical pharmacist, I feel more confident to manage my medicines.	X%
My clinical pharmacist is working as a team member with my other health care providers.	X%
Overall, how would you rate the quality of care and services you received from the clinical pharmacist?	X%

Due to roll out and timing of data collection, limited patient survey data is available specific to this clinic. **See appendix I.C.3.** for data specific to [clinic name].

4. Improved Clinician Experience

Primary Care Providers at [clinic name] provided feedback to the clinic operations lead. Excerpts are included below and the additional feedback can be found in **appendix I.C.4.**

“MTM services: I love the fact that she has 1 hour with the patients to discuss chronic health issues, to review medications (drug to drug interactions), to make changes in order to save patient[s] money. We don’t get a lot of time with the patient bc they have concerns. However I believe it’s such a HUGE service to our patients in keeping them healthy. I have complete trust in [pharmacist name]. She is a wonderful communicator. Visit notes structured to easily read and understand. I hope this service will continue at [clinic name].”

“The ITM meeting process that she has started at [*clinic name*] has been a great way to learn how to better communicate and collaborate among the different departments of the clinic for the ultimate goal of increasing overall patient outcomes with their diseases.”

“[*pharmacist name*] has also been a great resource for more complex patients with making decisions about which medications fit the overall patient best (with any diagnosis, not just with diabetes). I like the “teamwork” mindset that the PharmD service brings to [*clinic name*] for the providers. I like having another resource for patients to receive more education about their medications.”

Section II: Market Overview:

A. Attitudes and Beliefs:

- Prior to the resident pharmacist, none of the clinicians at [*clinic name*] had experience working with an MTM pharmacist.
- Overwhelmingly, providers at [*clinic name*] have positive reviews of the MTM service and working with the MTM pharmacist. The providers recognize the clinical impact and value of the work being done. This also demonstrates the strong relationships and trust formed. See Section I.C Program Description: Value for details on provider satisfaction.

B. Quality Measures:

- As noted in the literature previously outlined, MTM services have demonstrated clinical improvement in quality measures. This remains a significant opportunity for [*clinic name*].

Current [*Clinic Name*] Minnesota Community Measures Quality Scores

Measure	Year 1 results		Year 2 results
	[<i>Clinic name</i>]	MN average	[<i>Clinic name</i>] (MN average not yet published)
Asthma: adults	36%	51%	44%
Asthma: children	25%	58%	39%
Depression: feel better (6 months)	4%	8%	7%
Diabetes: adults	43%	45%	48.9%
Vascular care	65%	62%	63.7%

***bold** denotes below average

Table adapted from MN Health Scores website.¹⁰

Section III: Infrastructure Resources

Currently Provided by [*Clinic name*]:

[*Clinic name*] has provided significant infrastructure and support staff support for the MTM program.

<p>A. <u>Exam Room</u></p>	<p>a. The exam room provided allows for seating/standing of patient plus 1-2 guests, pharmacist and student or resident. Pharmacist will use office space adjacent to exam room for administrative work. Shared space in the three stations may also be utilized.</p> <p>b. Furnishings: 3 chairs, sphygmometer, fingertip pulse oximeter, sink, soap, paper towel dispenser, face tissues, sharps container, phone with plantronics headset, desk, laptop, two coat hooks and lockable storage.</p> <p>c. Exam room will meet the Department of Human Services Medication Therapy Management Privacy/Space Requirements.¹²</p>	
<p>B. <u>Appointments</u></p>	<p>a. Initial MTM visits will be 60 minutes in length. Follow-up visits may be scheduled for 30 or 60 minutes, per pharmacist's discretion.</p> <p>b. Appointments will be scheduled by the pharmacist, front desk staff, or info hub/call center staff following the script and workflow found in appendix III.B.</p>	
<p>C. <u>Support Staff</u></p> <p>Calling scripts and frequently asked questions will be available to the support staff. See appendix III.C.</p>	<p>a. Floor/Triage nurses</p>	<p>Room the patient, start visit note in the electronic health record, take vitals and enter vitals into the electronic health record. Call patients for follow-up concerns as appropriate.</p>
	<p>b. Front desk staff</p>	<p>Check-in patients in upon arrival. They will also be trained in scheduling PharmD appointments.</p>
	<p>c. Call center staff</p>	<p>Available to call and schedule patients, answer basic questions about MTM, and call patients after no show appointments.</p>
	<p>d. MTM coordinators</p>	<p>Experts in billing and coding processes. Available to answer PharmD questions and process billing.</p>
<p>D. <u>Communication and Documentation</u></p>	<p>The pharmacist will communicate with patients in person, via patient portal message, in written after visit summaries, and via telephone. Communication with clinic staff will be in person, via telephone/voicemail, email, clinic EMR. Documentation: PharmD will document patient care utilizing the Subjective-Objective-Assessment-Plan (SOAP) outline. Documentation will occur both in the local electronic health record for on-site provider communication and remotely in Fairview's EMR for the billing process.</p>	

Currently Provided by Fairview:

MTM Administrative Support	MTM Director, Operations Lead and Supervisors MTM Coordinators: The MTM Coordinators process and complete all billing claims. They are also instrumental in scheduling transitions of care MTM appointments.
Medical Resources	Micromedex, UptoDate, Pubmed access, and more
Technology	Laptop, Cell phone

Section IV: Collaboration and Communication with Healthcare Providers

A. Methods for communication:

- a. The pharmacist will attend to electronic medication record (EMR) communication, voicemails, and email on weekdays. The pharmacist will be available in person for consults and medication questions during regular daytime clinic hours.

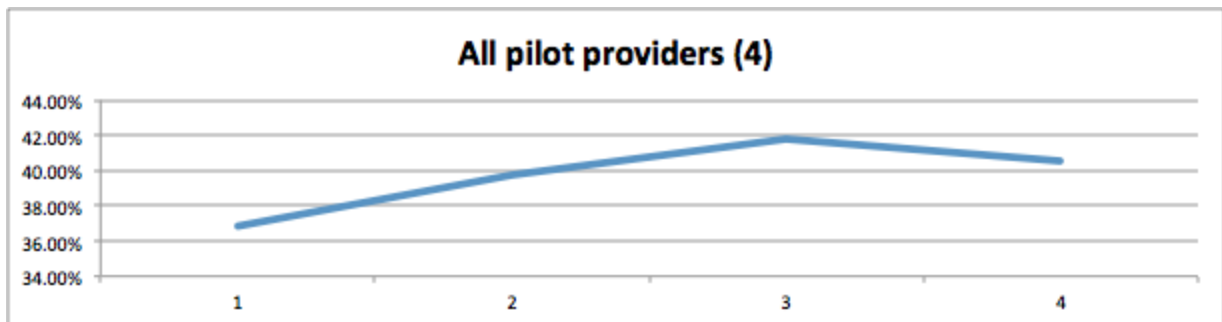
B. Referrals/Clinical Questions:

- a. Any clinic or support staff can refer a patient, patients can self-refer or their primary care provider may refer them.
- b. Communicating drug information questions or referrals to PharmD: EMR messages, in-person communication, or referral to call hub.

C. Interprofessional Team Meetings (ITM):

- a. Interprofessional collaboration, specifically with a pharmacist, has demonstrated benefit in clinical outcomes in the literature.¹⁴⁻¹⁵
- b. Quality huddles, titled interprofessional team meetings (ITMs) were introduced by the MTM pharmacist to encourage interprofessional collaboration and communication among the staff at [*Clinic name*].
- c. ITMs were first piloted with four providers focusing on diabetes outcomes, intentionally an area with strong evidence of MTM benefit. These ITMs directly influenced the referrals patterns of providers and quickly built the MTM patient panel.
- d. In four months, improvement in diabetes outcomes (Minnesota Community Measures) has been noted. **See graph Interprofessional Team Meeting (ITM) Pilot Provider Preliminary Results below.** The executive committee has approved further implementation with the intention of a clinic-wide process.

Interprofessional Team Meeting (ITM) Pilot Provider Preliminary Results



% of Patients Passing MN Diabetes Community Measures			
Dec	Jan	Feb	Mar
36.85%	39.78%	41.85%	40.55%

D. Optimizing Medications:

- a. Collaborative Practice Agreement: The pharmacist will manage chronic conditions following the collaborative practice agreement with designated collaborating providers.¹¹
- b. Communication: The pharmacist will communicate medication recommendations directly to the patient and collaborating provider at the conclusion of the MTM visit.

Section V: Billing Plan, Revenue and Expenses

A. Payor Categories:

- Payment for MTM services may come from medicaid insurance, medicare insurance, commercial insurance, or private pay patients (if the patient's insurer does not cover the service).
- Patients may also fall into a “shared savings” category, designating them as patient for which the network may increase reimbursement by improving health outcomes and decreasing total cost of care.

B. Billing Strategy: The pharmacist will bill for services utilizing the MTM codes as outlined by the Department of Human Services (DHS): Medication Therapy Management Services (MTMS).¹²

Current Procedural Terminology (CPT) code	Definition	Cost of service
99605	First encounter service performed with a patient in a time increment of up to 15 minutes	\$52.00
99606	Follow-up encounter performed face to face with a patient in a time increment of up to 15 minutes	\$34.00
99607	Additional increments of 15 minutes	\$24.00

C. Claims:

- The pharmacist will review the patient's insurance and discuss cost/coverage with the patient either before or during the initial visit.
- The pharmacist will then appropriately categorize the patient encounter based on the patient's coverage and select the appropriate codes.
- Next, the MTM coordinators will process the claim through the patient's insurer.

D. Revenue and Expenses

- Billing for services began in November. In regards to revenue, MTM visits have been classified below as billable or non-billable. The network's shared savings contracts include patients from both billable (ex. fee-for-service) contracts and non-billable contracts (ex. accountable care organization populations, MIPS, etc.).
- Since November, 144 visits in 5 months amounts to an average of 29 visits/month. As evidenced by the visit growth table (see table below), PharmD services are becoming more utilized at [*Clinic name*] as providers and other staff see the value of the service.
- A standard patient load for 0.6 FTE pharmacist is 60 patients/month. Considering total patient population at [*Clinic name*] (approx 28,000) and potential shared savings population [*X number*], there is potential to expand the FTE to 1.0.

Current MTM Visit Growth Table for 0.6 FTE:

Month	9	10	11	12	1	2	3	4
Pts seen	15	19	28	23	32	31	33	53

*Note: a discrepancy of #3 in the number of patients exists between Total Claims Table and MTM Visit Growth Table due to 3 claims being processed and billed through PharmD Resident's Preceptor.

Current Revenue: Total Claims for November through March of year 1	% of MTM Visits	# of visits Total: 196
Fee for Service/Billable Claims	X%	X number
[Contracted insurer]		X number
[Contracted insurer]		X number
[Contracted insurer]		X number
At Risk Population/Non-billable Claims	X%	X number
Medicare/MIPS, Care Transitions		X number
Shared Savings, ACO Populations		X number
Clinic Consults/Non-billable Claims	X%	X number
Chart Review or Medication Question		X number
Total Billed Amount (6 months)	Total Direct Revenue:	\$X
	Total Indirect Revenue:	Savings on [X number] patient encounters.

Projected MTM Visit Growth Table for 1.0 FTE:

Month	5	6	7	8	9	10	11	12	1	2
Pt visit estimate	55	60	65	70	75	80	85	90	95	100

Projected Revenue for 1.0 FTE Projected growth (as noted in table above) = 1095 visits in year 1 100 visits/month = 1200 visits in year 2	% of MTM Visits	Estimate Year 1 # of visits Total: 1095	Estimate Year 2 # of visits Total: 1200
Billable claims	X%	X number	X number
Non-reimbursable Claims	X%	X number	X number
Clinic Consults	X%	X number	X number
Total Billed Amount (12 months) Average reimbursement per billable claim from resident year data: \$X/billable visit	Total Direct Revenue: Total Indirect Revenue:	\$X Savings on [X number] patient encounters	\$X Savings on [X number] patient encounters

Proposal:

Expand current MTM services at [*Clinic name*] from 0.6 FTE Resident Pharmacist to 1.0 FTE Pharmacist.

Revenue and Expenses	Price
Total Annual Expenses	(\$X)
PharmD 1.0 FTE Salary and Benefits	(\$X)
Proposed Direct Revenue at 1.0 capacity	\$X
Net Loss	(\$X)

The value in MTM for the Fairview Network is through shared savings on at-risk patient populations.

Proposed Indirect Revenue: **Savings on X “shared savings” patient encounters.**

- Considering MTM yearly follow-up rate of 2.1 = X individual patients.
- Citing the study *Clinical and Economic Outcomes of Medication Therapy Management Services: The Minnesota Experience*, the return on investment for MTM pharmacist is 12 to 1.

Section VI: Marketing

A. Marketing to Patients:

- a. Clinic lobby: PharmD will have a photo and brief description of service rotating through the clinical services announcements on the television. **See appendix VI.A.a.**
- b. Online: Clinic website will have brief description of PharmD services.
- c. PharmD will have business cards available for patients to take and pass on. **See appendix VI.A.c.**

B. Marketing to Clinic Staff:

- a. PharmD will train call center and front desk staff on scheduling appointments to allow time for a clear explanation of the service and one on one time to answer questions.
- b. All staff will be encouraged to refer any patients with medication questions or interest in learning more about their medications.
- c. PharmD will meet with medication management and triage nurses to further describe MTM service and the benefits so they may refer appropriate MTM candidates.

C. Marketing to Other Providers:

- a. PharmD will supply providers with business cards to hand out to their patients.
- b. Provider stations will have posting of common “Opportunities to refer to MTM,” adapted from tip sheet used at another Fairview clinic. **See appendix VI.C.**
- c. PharmD will speak to the clinic’s executive committee about medication therapy management services twice yearly to update the executive committee and garner support.

Section VII: Maintaining the Practice

A. Continuous Professional Development Plan: Short-term

- a. The pharmacist will maintain continuing education credits as outlined by the Minnesota Board of Pharmacy.¹³
- b. Opportunities for continuing education: The pharmacist will be engaged in continuing education monthly at the MTM practitioner meetings. The pharmacist will be allotted travel/conference registration stipend yearly for continuing education. This stipend may go towards conference registration, travel and/or associated expenses for pharmacy or medical conference(s). This may include (but is not limited to): Minnesota Pharmacists Association MTM Symposium, Pharmaceutical Care Lyceum, American College of Clinical Pharmacists, or the American Society of Health-System Pharmacists conference(s).

B. Continuous Professional Development Plan: Long-term

- a. Opportunities for continuing education: The pharmacist will achieve board certification in ambulatory care pharmacy (BCACP) within five years of the practice. This will allow for continued clinical study during the initial certification process and throughout the clinical career as the pharmacist maintains this certification.
- b. Opportunities for clinical presentation: The pharmacist will provide clinical updates for the patient care staff at [*Clinic name*] twice yearly. The pharmacist will also have the opportunity to present clinical material every three years at the Fairview MTM practitioner meetings.

C. Continuous Quality Improvement

- a. The pharmacist will develop collaborative goals with the interprofessional teams aligning with the clinic's yearly initiatives. Monthly, the pharmacist will meet with the clinic operations manager to review the goals and identify areas for improvement. Quarterly, the pharmacist will attend the all staff quality meeting.
- b. Peer review: The pharmacist will engage in the peer review process. This entails peer review of two patient care encounters including documentation and clinical assessment yearly. One review will be blinded and one unblinded. The pharmacist will then review the feedback and develop a plan for addressing areas of improvement.

D. Maintaining Patient Care

- a. PharmD Panels: The PharmD will manage a panel of patients, following up as medically appropriate and in coordination with the patient's medical care provided by their primary care provider. When a patient fails follow-up (not scheduled, cancelled or no show appointments), PharmD or support staff will contact the patient twice by phone and once by written communication (i.e. mailing).
- b. Patient Recruitment
 - i. Shared Savings Patients
 1. MTM services could be further tailored to reach patients who fall into network "shared savings" and are not meeting quality goals

with upcoming technology including new dashboards in EPIC. By targeting patients who are under shared savings contracts and not meeting healthcare goals, this would increase financial benefit in cost-savings for the network.

- ii. Hospital Discharge:
 - 1. MTM Coordinators will schedule visits for patients with a transition of care MTM referral.
 - 2. PharmD may review Fairview daily discharge reports for patients recently discharged from a Fairview facility or with an emergency visit. PharmD may collaborate with primary care provider to encourage a referral to MTM service, if applicable.
- iii. Uncontrolled Chronic Conditions
 - 1. Quality panels will be generated monthly, identifying patients not meeting clinical quality measure goals. PharmD will utilize these panels as a recruitment tool and discuss potential benefit of comprehensive medication management services with provider as appropriate. Support staff will then contact the patient directly.
 - 2. Additionally, these panels will be reviewed and discussed at the ITMs. See section IV interprofessional team meetings for details.

Section VIII: References

1. The Patient Care Process for Delivering Comprehensive Medication Management (CMM): Optimizing Medication Use in Patient-Centered, Team-Based Care Settings. CMM in Primary Care Research Team. July 2018. Available at https://www.accp.com/docs/positions/misc/CMM_Care_Process.pdf.
2. Cipolle R, Strand L, Morley P. Pharmaceutical care practice: the patient-centered approach to medication management services. Third Edition. McGraw Hill. 2012.
3. Truong HA, Groves CN, Congdon HB, Dang DT, Botchway R, Thomas J. Evaluation of potential cost savings and estimated cost avoidance from a medication therapy management safety-net clinic. *Journal of the American Pharmacists Association*. 2015;53(3):e277.
4. Sachdev G. Sustainable business models: Systematic approach toward successful ambulatory care pharmacy practice. *Am J Health Syst Pharm*. 2014 Aug;71(16):1366-1374.
5. Nigro SC, Garwood CL, Berlie H, et al. Clinical pharmacists as key members of the patient-centered medical home: An opinion statement of the ambulatory care practice and research network of the American College of Clinical Pharmacy. *Pharmacotherapy* 2014;34(1):96–108) doi: 10.1002/phar.1357.
6. Ramalho de Oliveira D, Brummel A, Miller D. Medication therapy management: 10 years of experience in a large integrated health care system. *J Manag Care Spec Pharm*. 2010 Apr;16(3):185-195.
7. Isetts BJ, Schondelmeyer SW, Artz MB, et al. Clinical and economic outcomes of medication therapy management services: the Minnesota experience. *J Am Pharm Assoc*. 2008;48:203–211.
8. Bodenheimer, T., Sinsky C. From triple aim to quadruple aim: care of the patient requires care of the provider. *Ann Fam Med*. November/December 2014. 12(6):573-576. doi: 10.1370/afm.1713.
9. United States Census Bureau, United States Department of Commerce. QuickFacts: Minnesota Retrieved from: <https://www.census.gov/quickfacts>.
10. Minnesota Health Scores. Family Practice. Retrieved from: <http://www.mnhealthscores.org>.
11. Centers for Disease Control and Prevention. Advancing Team-Based Care Through Collaborative Practice Agreements: A Resource and Implementation Guide for Adding Pharmacists to the Care Team. Atlanta, GA: Centers for Disease Control and Prevention, U.S. Department of Health and Human Services; 2017.
12. DHS website: Department of Human Services. Medication Therapy Management Services (MTMS). Retrieved from: http://www.dhs.state.mn.us/main/idcplg?IdcService=GET_DYNAMIC_CONVERSION&RevisionSelectionMethod=LatestReleased&dDocName=dhs16_136889. Revised: 03-08-2018.
13. Minnesota Board of Pharmacy. Continuing education requirements. Retrieved from: <https://mn.gov/boards/pharmacy/>.

14. Antoline C., Kramer A., Roth M. (2011). Implementation and methodology of a multidisciplinary disease-state-management program for comprehensive diabetes care. *Perm J.*, 15(1):43-8.
15. Gucciardi E, Espin S, Morganti A, Dorado L. Exploring interprofessional collaboration during the integration of diabetes teams into primary care. *BMC Fam Practice.*, (2016)1;17:12. Doi: 10.1186/s12875-016-0407-1.
16. Brummel A., Soliman AM., Carlson AM., Ramalho de Oliveira D. Optimal Diabetes Care Outcomes Following Face-to-Face Medication Therapy Management Services. *Population Health Management.* 2014;16(1)28-34. Doi: 10.1089/pop.2012.0023.
17. Budlong H, Brummel A, Rhodes A, Nici H. Impact of Comprehensive Medication Management on Hospital Readmission Rates. *Population Health Management.* 2018;21(5)395-400. Doi: 10.1089/pop.2017.0167.
18. Wells T, et al. Description of pharmacist-led quality improvement huddles in the patient-centered medical home model. *J Am Pharm Assoc.* 2018;58:667-672.