APPENDIX

B

Comprehensive Medication Management Service Business Plan for The Hive Health System

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COMPREHENSIVE MEDICATION MANAGEMENT SERVICE EXECUTIVE SUMMARY

PURPOSE OF THE BUSINESS PLAN

To secure commitment and funding to open a comprehensive medication management (CMM) service as part of a multidisciplinary team in Colony Family Medicine to serve the growing population of complex patients with chronic disease, specifically focused on diabetes and heart failure.

BACKGROUND

This service will be located within Colony Family Medicine affiliated with The Hive Health System located in Any State, USA. This type of positioning will allow for easy team recognition and patient access. Clinical pharmacy specialists with advanced training, including the management of diabetes and heart failure, will provide chronic disease state management and comprehensive medication management for patients referred by their primary care physician. A CMM service affiliated with this medical center will support the organization's goal of managing populations effectively, providing optimal team-based care, increasing access, and enhancing patient outcomes. Achieving these goals also supports the organization's mission.

THE MARKET

A market analysis has demonstrated a need to increase the capacity for primary care management and improve quality outcomes for the practice. There currently are no other medical practices in the area providing pharmacist-based ambulatory patient care services. The CMM service will offer cutting-edge services that are anticipated to satisfy patient needs and improve patient outcomes.

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ORGANIZATION

The Colony Family Medicine pharmacist will report to the manager of ambulatory pharmacy services and maintain a dotted-line relationship with the medical director. The manager of ambulatory pharmacy services is responsible for the health system's ambulatory pharmacy operations, and the medical director oversees the clinical management of the medical center's patients.

FINANCES

The major expense in establishing the CMM service includes hiring an appropriately trained clinical pharmacist. A conservative estimate of the return on this investment would be an annual profit of approximately $9,000 by year 3.

CONCLUSION

The addition of a CMM service at Colony Family Medicine will expand current primary care access, improve performance on quality and population-based metrics, and provide subsequent revenue.

COMPREHENSIVE MEDICATION MANAGEMENT SERVICE

DESCRIPTION OF SERVICE

The demand for expanded ambulatory services and the provision of care through a primary provider is prevalent in today's healthcare environment. As the level of care provided in an outpatient setting increases, so should the resources available to patients to ensure optimal outcomes. Integrated care, coordinated among physicians, pharmacists, nurses, and other health professionals, is essential to achieving medication therapy outcomes that improve the patient's quality of life. The addition of clinical pharmacy patient care services to healthcare teams optimizes medication therapy choices, improves adherence to therapy, adherence to evidence-based therapy, improves transitions of care, decreases preventable adverse medication events, decreases polypharmacy, and decreases medication-related hospitalizations or rehospitalizations.[1-3]

The benefit of adding clinical pharmacy services in the ambulatory care setting in therapeutic areas such as anticoagulation, heart failure, lipids, diabetes, asthma, and vaccination is evident in the literature.[3] There are also barriers to development and implementation of such services. These barriers include the absence of clear-cut billing mechanisms and processes for reimbursement, general lack of familiarity with clinical pharmacy services in the healthcare community, and increasing labor expense pressure.

The problem of hospital readmissions is of concern for all health systems. Patients who return to the hospital within 30 days after readmission are at risk for poorer outcomes and are responsible for a significant amount of preventable cost to the health system. With a readmission rate of 15%, The Hive Health System is not immune to this problem. The top two conditions contributing to hospital readmissions at The Hive Health System are heart failure and chronic obstructive pulmonary disease. Forty-five percent of patients readmitted for these conditions have diabetic complications.

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Colony Family Medicine is an established family medicine practice located adjacent to the health system providing the community with convenient access to comprehensive medical expertise and vast healthcare resources. Colony Family Medicine's CMM service will be embedded in the same office space as Dr. Busybee. This type of practice model will provide clinical pharmacy services to patients who are seen by practitioners at Colony Family Medicine. The anticipated start date for the CMM service will be January of the next year.

Establishing a CMM service in Colony Family Medicine will provide heart failure and diabetes patients—populations highly susceptible to poor medication adherence, medication-related problems, and rehospitalization—convenient access to clinical pharmacy services. The CMM service will provide care consistent with the scope of pharmacy practice, focused on decreasing hospitalizations and readmissions and improving patient care including the following:

1. A comprehensive medication therapy review and reconciliation posthospital discharge and with each office visit
2. Optimization of medication therapies utilizing comprehensive medication management processes, including assessment of medication problems such as medication adherence; initiation or updating a plan of care for medication therapy in conjunction with the healthcare team by using evidence-based medicine and institutional guidelines to drive therapies; and performing interventions such as patient education, initiation of medications and dose titrations, laboratory monitoring, and referral to other members of the multidisciplinary team, etc.
3. Assistance with medication access issues
4. Monitoring for optimal effectiveness of the medication regimen and detecting and resolving medication-related problems, such as adverse medication effects and improper utilization
5. Creation and maintenance of an up-to-date personal medication record
6. Patient education in self-management, including a medication-related action plan for disease states and related lifestyle issues
7. Documentation and follow-up with all health providers (physicians, pharmacies, etc.) to ensure continuity of care regarding medications and therapy plans

The CMM service will be staffed by one primary care clinical pharmacist. The pharmacist will function like an advanced practice provider and work under the supervision of the primary care physicians within Colony Family Medicine. He or she will also work alongside other members of the primary care team. The pharmacist will utilize incident-to physician services, facility billing, and chronic care management codes as the billing mechanism to start the service. As reimbursement models shift toward pay-for-performance and attainment of quality measures, measuring improvement in quality outcomes, access, and total cost of care will become increasingly important.

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The number of patients in the family medicine practice is expected to increase over the next 5 years based on the aging population within the community. Dr. Busybee—the single provider in the practice—is interested in serving as the initial referral source, has a panel of over 3,000 patients, and has already identified the ability to refer up to 10% of his panel to the new service for comanagement. It is possible that the demand for services may require additional pharmacist time, and in that event, additional pharmacist full-time equivalents (FTEs) will be considered. Referral volumes will be assessed quarterly to determine if additional resources are required.

Colony Family Medicine's CMM service will be the first in the area to utilize clinical pharmacist services as a member of the care team. It will differentiate itself with the establishment of a convenient location where patients can easily utilize the available services. It will also have access to The Hive Health System's electronic documentation systems, which will improve continuity of care and efficiency by providing the pharmacists with complete patient information from the integrated medical record.

Finally, The Hive Health System is considered a leader in healthcare with innovative, progressive, and quality services that have proven to be of value to its patients. This program aligns well with the Pharmacy Practice Advancement Initiative and optimal use of pharmacist knowledge and skills. This will be the first program in the ambulatory setting, and it will follow the same goal-oriented approach of other pharmacy-based initiatives. We will benchmark our services based on other similar ambulatory sites by comparing our site to similar Vizient or Group Practice Improvement Network members to ensure that we are sustainably optimizing patient care.

CONSISTENCY WITH THE ORGANIZATION'S MISSION

CMM Service Mission Statement

The mission of the CMM service through optimal medication use is to improve patient outcomes and quality of life. To do so, it will promote seamless, patient-centered, quality care to patients across the continuum of our health system. It will strive to ensure that patients have optimal drug therapy as recommended by existing standards of care.

Consistency with The Hive Health System Mission

The service's mission aligns well with that of the health system. The mission statement of the department of pharmacy services is to work collaboratively with other healthcare professionals to provide optimal pharmaceutical care to all patients, to advance medication knowledge through education and scholarly activities, and to promote positive patient outcomes. The mission of The Hive Health System is to serve the community by responding to their healthcare needs with excellent and efficient care, with empathy, and with the patient always at the center of care.

In promoting The Hive Health System excellence, Colony Family Medicine's CMM service will enhance the pharmacy, practice model, and health-system goals of service, quality, finance, people, and growth. Colony Family Medicine's CMM service will increase access to care by managing patients efficiently with an emphasis on seeing

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patients discharged within 72 hours from the inpatient service. It will enhance quality by ensuring evidence-based care and adherence to current diabetes and heart failure guidelines, using the existing electronic medical record for continuity of care, and providing education and patient self-monitoring plans to ensure that patients properly use their medications, as well as optimizing medication therapies. It will benefit finance by increasing pharmacy-generated revenue, reducing readmissions, and supporting attainment of performance measures and goals. Patients will benefit from the team-based approach based on patient-centered principles. It will become the first medical center to offer ambulatory pharmacy services in the area.

The objectives of Colony Family Medicine's CMM service are as follows:

1. Provide optimal drug therapy family medicine diabetes and heart failure patients
2. Increase patient understanding of their disease and the medications used to control the condition
3. Decrease the incidence of preventable adverse medication events
4. Improve patient adherence through individualized patient interactions
5. Increase the efficiency of physician's office time
6. Promote cost-effective utilization of medications
7. Improve patient quality of life
8. Decrease the 30-day readmission rate and the number of hospitalizations and emergency department visits attributed to congestive heart failure (CHF) exacerbation
9. Improve adherence to treatment guidelines

A positive return on investment is expected for the service. The costs of providing care will be offset by the visit-based revenue generation, reduction in utilization, and improved outcomes measured by payers in this market.

MARKET ANALYSIS

Identification of the Market for Patients with Heart Failure and Diabetes

Heart failure is a complex clinical syndrome predominantly manifested by fatigue, dyspnea, and fluid retention leading to pulmonary and peripheral edema. It is a progressive disorder with no cure. An estimated 5 million people are affected in the United States (1.5–2% of the population), with 400,000–700,000 new cases diagnosed each year. Of the population greater than 65 years of age, 6–10% has heart failure.

As the leading national cause of hospitalizations (6.5 million hospital days), the annual direct expenditures because of heart failure total $40 billion. This accounts for 5.4% of the national healthcare budget. The risk of death is 5–10% annually in patients with mild symptoms and increases to 30–40% annually in patients with advanced disease. Patients often require multiple medications to optimize treatment outcomes and require frequent dose adjustments to achieve therapeutic goals while minimizing the adverse side effects associated with therapy. In addition, diligent laboratory moni-

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toring is required with complicated medication regimens. Pharmacists are recognized as drug therapy experts who can significantly impact patient outcomes by addressing these medication management needs.

Colony Family Medicine currently has 1,930 patients with the diagnosis of heart failure. Middleton as a community is aging based on the most recent U.S. census data. Over one third of the population is over the age of 65.[4] Estimates on the prevalence of heart failure would suggest that over 5,000 patients in our service area may have heart failure. With the aging population, we can expect approximately 250 patients yearly to have a new diagnosis of heart failure.

Similar daunting statistics follow the epidemic of diabetes. Based on 2017 data, 30.3 million people in the United States are diabetic. It is estimated that by 2050, 1 in 3 people will be diabetic.[5] The cost of diabetes is staggering: total cost is estimated at $327 billion annually, with $237 billion of that incurred as direct medical costs.[6]

Identification of Customers and Customer Needs

- *Patients*—Patients with heart failure are prone to misunderstand their medications, be confused about self-management, and experience health deterioration, which can lead to frequent hospitalization. Diabetic patients benefit from comprehensive, frequent team-based care including medication titration and self-management goal reinforcement.
- *Physicians*—Colony Family Medicine has a group of excellent family practice providers. Based on our internal analysis, the practice is struggling to meet certain quality measures. The addition of a pharmacist to the team to focus on the heart failure and diabetic patients would allow physicians to make more efficient use of office time and to facilitate adherence to evidence-based guidelines.
- *Pharmacy department*—A CMM service would promote clinical pharmacy services in the ambulatory setting and expand the pharmacist's role and presence across the health system.
- *Nursing*—A CMM service would utilize and promote a multidisciplinary approach to patient care. In addition, a pharmacist would facilitate coordination of care in efforts to improve adherence to quality measures. The pharmacist would effectively help to maximize efficient use of nursing personnel time (e.g., supporting medication reconciliation during transitions of care) and ensure patients receive optimal drug therapy and education.
- *Administrators*—A CMM service would improve resource utilization across the health system and help to reduce the 30-day readmission rate for CHF exacerbations as well as achievement of diabetic Healthcare Effectiveness Data and Information Set (HEDIS) goals.

There are many benefits to moving forward with the CMM service. However, significant barriers must be addressed. Reimbursement currently is the greatest barrier for such a service. Pharmacists are not recognized as Medicare Part B providers and, therefore, the service may only use facility and/or incident-to a physician billing option for face-to-face office visits in the current fee-for-service model. Chronic care manage-

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ment codes may also be used for services provided over the phone, when applicable. However, considering strategic partnerships with specific insurers and the risk associated with not meeting their quality goal standards, as well as provider access constraints and recruiting challenges, there is an opportunity to focus less on immediate fee-for-service revenue and evaluate long-term financial outcomes, especially associated with population health initiatives. Early results from multidisciplinary models suggest that this approach reduces costs and improves outcomes.[7]

Patients with diabetes and heart failure often require many visits with healthcare providers. It is essential that patients are educated on the impact a pharmacist can have in their care. This will help to reduce no-show visits. Communicating with patients so they understand the role of the pharmacist as a member of the healthcare team will show them how this will improve their health, ultimately resulting in fewer required office visits and hospitalizations. The key to success for implementation of this service will be informing and educating other healthcare providers, the public, and third-party payers.

To manage these barriers, the service will implement a robust quality and performance improvement measurement program and a comprehensive marketing program. These programs will be described later in this document.

MARKETING PLAN

Product

We will specifically define the services provided by the service as outlined under the description section of this business plan. The practice website will be updated announcing the addition of a pharmacist to the practice with a press release sent by the health system's marketing department. In addition, flyers will be created for healthcare providers and for patients that will clearly describe what kind of patient would need the CMM service and what to expect from the office visits. The flyers will be available throughout the office and can be downloaded from the e-newsletter sent to patients of the practice.

Price

Promotional materials and talking points will be developed that outline the value of the service in terms of quality of care and the overall cost and benefit to each patient.

Place

The service will utilize existing space at Colony Family Medicine, strategically positioned to have optimal access with the multidisciplinary team. The space will mimic the professional look of a physician's or nurse practitioner's space, which will provide the patient with confidence in the professional level of care that the pharmacist will provide.

Promotion

To introduce our new services to employees, the pharmacy department will inform staff of the CMM service opening by electronic mail. Also, the webpages of The Hive Health System, Colony Family Medicine, and the Department of Pharmacy Services will

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be updated with the new service, and the addition of the pharmacy specialist will be announced systemwide. The pharmacist will be integrated into office meetings to make the office staff aware of available services offered by the CMM service. To introduce our family medicine physicians to the pharmacy services provided, the new pharmacist will attend an administrative meeting with providers in the Colony Family Medicine facility and outline how the services will be integrated with one physician to initiate implementation and then expanded to others if the service does well. In addition, the clinical pharmacist will attend regional provider group meetings to increase visibility of clinical pharmacists within primary care settings to the broader health system.

People

Only qualified pharmacists as previously described will be recruited for this position. The pharmacists, to ensure current and ongoing competence, will participate in The Hive Health System credentialing and privileging process. The pharmacist's credentials will be used in promotional material.

Packaging

This program will be aligned with the patient-centered initiatives of The Hive Health System so that all utilizers of the service (patients, other healthcare providers, pharmacy department, nursing, and administration) will understand the experience they can expect to receive from the service.

Process

Policy and procedures will be developed such that each customer (patients, other healthcare providers, pharmacy department, nursing, and administration) will understand how to access the service, what to expect from the service, and what tangible output they will receive.

The performance improvement plan will track referral volume as well as patient and provider satisfaction, which will aid evaluation of the marketing plan. Should the service not generate the volume anticipated, pamphlets and flyers will be e-mailed to patients and social workers. Administrators will increase verbal communication concerning this service with patients.

FACILITY AND EQUIPMENT

This new service will be located within the existing family medicine practice named Colony Family Medicine. There will be an office for the clinical pharmacist and one pharmacotherapy exam room situated in a manner that facilitates communication within the team. See **Figure 1** for the schematic layout of the floor plan and proposed location of the pharmacotherapy exam room (Exam 1) that the pharmacist will be assigned. See **Appendix 1** for a list of fixtures and equipment needed.

MANAGEMENT AND ORGANIZATION

The Colony Family Medicine CMM pharmacist will report to the manager of ambulatory pharmacy services. This will facilitate continuity of pharmacy services within The Hive Health System. Specific patient care issues, the pharmacists will maintain a

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dotted-line relationship with the medical director for family medicine. Support for the service will be provided by the department's administrative and clinical staff as well as extensive support services from the health system for billing and reimbursement, drug information, medication safety, and informatics.

The proposed initial staffing plan is full-time support Monday through Friday. Initially, the office hours will require one FTE clinical pharmacist. The pharmacist will have obtained a doctor of pharmacy degree with a minimum of 1-year postgraduate training (PGY1). PGY2 training in ambulatory care pharmacy practice or equivalent experience is preferred. Coverage for leave will be provided by other clinical pharmacists in the department's ambulatory pharmacy services division.

FINANCIAL SUMMARY

The initial expenses to outfit the CMM service are estimates based on experience gained in establishing the organization's other ambulatory sites. As shown in **Appendix 2**, the major start-up expenses include office and exam room equipment. This may be circumvented if the practice can make available space outfitted for patient care; thus, the funds would be used for point-of-care testing materials and supplies required by learners.

A 3-year *pro forma* income and expense statement is shown in **Appendix 3.** Volumes have been conservatively estimated at an average of 10 patient visits per day Monday through Friday for the first year (allowing for half-hour initial appointments). The payer mix is expected to be greater than 60% Medicare (50/50 split of straight Medicare and Medicare Advantage), 30% commercial, and 10% Medicaid.

The focus of the CMM service will initially be Dr. Busybee's patients referred for management of diabetes and heart failure. Patient visits and reimbursement have been estimated based on experience at the department's other sites.

EVALUATION

The progress and success of the service will be monitored on a quarterly basis utilizing a balanced performance improvement measurement plan. It is described as follows:

Financial

- Direct costs and reimbursement
- Medication costs
- Cost avoidance through healthcare utilization (rehospitalizations)
- Quality performance measure reimbursement

Process

- Referral volume and source
- Visit volume
- No-show visits
- Visit length

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- Communication issues and time deviation
- Acceptance of pharmacist recommendations not under collaborative practice agreement

Clinical Outcomes

- Adverse drug events
- Medication adherence
- Medication costs
- National Quality Forum endorsed and P4P heart failure measures
- HEDIS diabetes measures
- Patient experience and satisfaction (Press-Ganey satisfaction survey)
- Team-based work
- Communication issues
- Team satisfaction

The manager of ambulatory pharmacy services will prepare a consolidated quarterly evaluation report for incorporation into the department's balanced score card, which the pharmacy director and the medical director for family medicine will review.

REFERENCES

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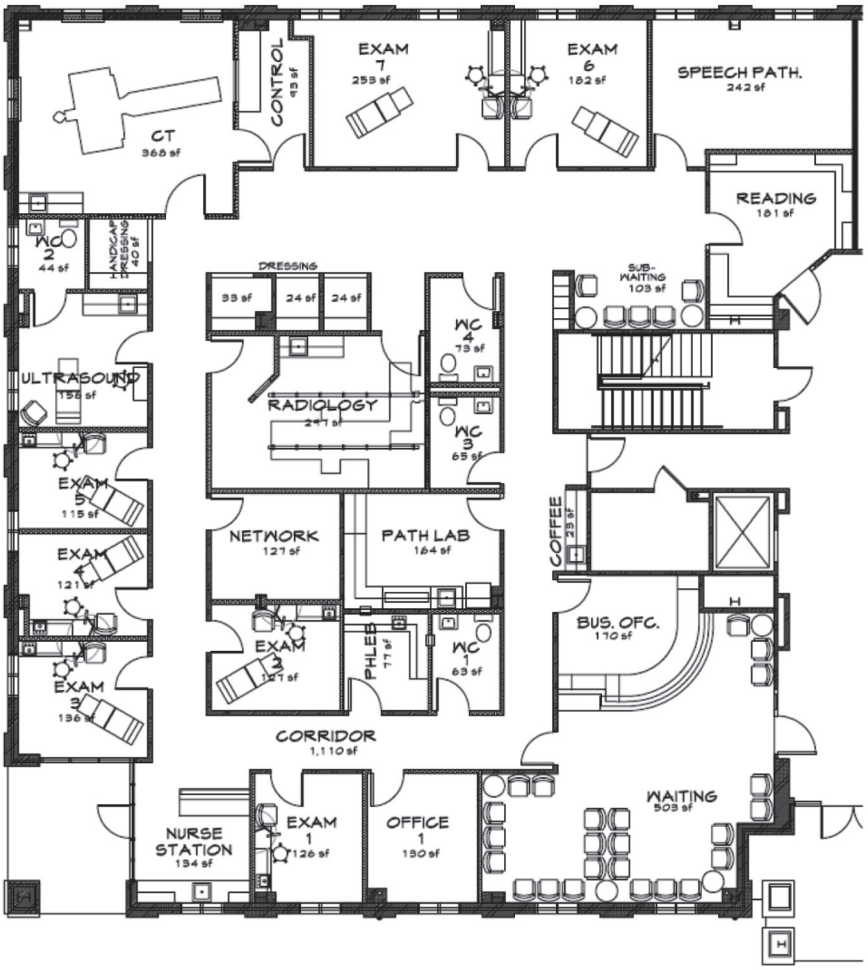

Figure 1. Floor Plan

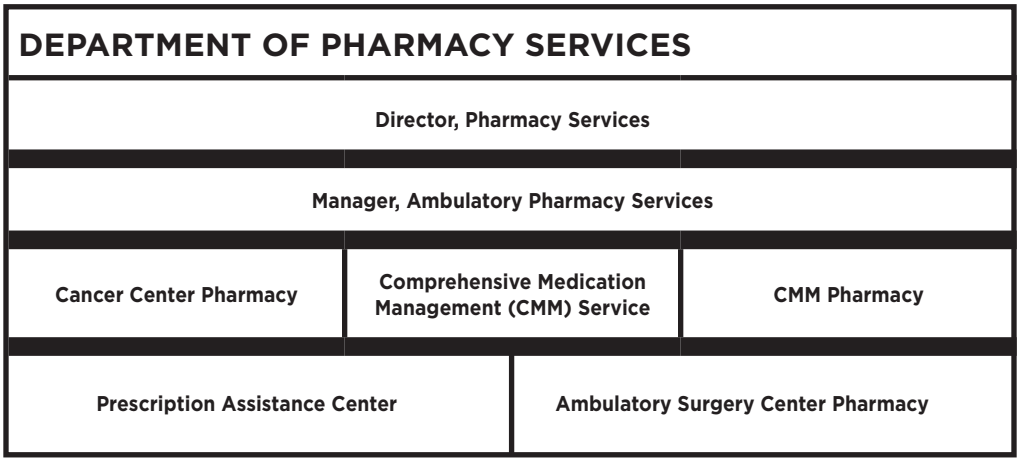

Figure 2. Organizational Structure

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APPENDIX 1. EQUIPMENT AND FIXTURES

- Pharmacotherapy counseling/exam room/office
- Computer workstation
- Office equipment
- Sphygmomanometer
- Dedicated phone line
- Scale

APPENDIX 2. START-UP EXPENSES

Computer workstation	$1,000
Printer	$500
Telephone	$300
Telephone installation	$250
Fax machine/copier	$300
Scale	$100
Sphygmomanometer (wall mounted)	$140
TOTAL	**$2,590**

APPENDIX 3. 3-YEAR *PRO FORMA* INCOME AND EXPENSE STATEMENT

Summary: Financial Feasibility of the Comprehensive Medication Management Service	
Plan:	Expand CMM services to 100 family medicine patients with diabetes and heart failure
Assumptions:	206 visit slots per month 66% will be separately chargeable (CPT 99211) 33% will be seen on the same day as provider or be telephone visits (no direct billing) Payer mix: 30% Medicare, 30% Medicare Advantage, 30% commercial, 10% Medicaid Laboratory time testing is a break-even item for the majority of the patients, so this revenue and expense is not shown Chronic care management (CCM) billing can be completed for Medicare patients once per month for telephonic work The request is for 1.0 clinical pharmacist 25% was added to the salaries to cover benefits Included is an estimate of cost avoidance anticipated by reducing readmissions Included is an estimate of quality performance reimbursement from Medicare Advantage shared savings

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			Year 1	Year 2	Year 3
	New Encounters		2,472	2,472	2,472
		Chargeable encounters	1,632	1,632	1,632
		Visit charge	$ 55	$ 57	$ 59
		Visit reimbursement	$ 22	$ 24	$ 26
	EXPENSES				
	Personnel expense				
		Pharmacist	$ 110,000	$ 112,200	$ 114,444
		Benefits	$ 27,500	$ 28,050	$ 28,611
	Start-up expense		$ 2,590		
	Supplies Professional development expense		$ 1,000	$ 1,000	$ 1,000
	TOTAL EXPENSES		$ 141,090	$ 141,250	$ 144,055
	REVENUE				
	Visit gross revenue		$ 89,734	$ 92,997	$ 96,260
	Visit net revenue		$ 35,893	$ 39,156	$ 42,420
	Net CCM revenue	$43 per member per month (PMPM) for Medicare population	$ 30,960	$ 30,960	$ 30,960
	Cost avoidance	25% reduction in heart failure admissions in the patients served	$ 60,000	$ 60,000	$ 60,000
	Quality reimbursement	3% of total shared savings for the practice attributed to program ($1 M per year anticipated)	$ 30,000	$ 30,000	$ 30,000
	TOTAL REVENUE		$ 156,853	$ 160,116	$ 163,380
	NET INCOME		**$ 15,763**	**$ 18,866**	**$ 19,325**

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