

Cardiac Outpatient Rehabilitation (COR) Physical Therapy



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I. Executive Summary

Centers for Medicare and Medicaid Services (CMS) have adopted a triple aim in health care reform to achieve: better care, better health, and lower costs. In the current fee-for-service (FFS) payment model, incentives reward high volume, but not quality or value. As health care costs continue to rise, innovative reimbursement models coupled with performance metrics are being implemented in hopes of reducing this financial burden on the economy. One form of reimbursement that is gaining traction is bundling payments for costly and common episodes of care. However, while many providers have yet to be successful with implementing these programs, there are profound opportunities within it to evaluate a provider's cost per episode type and variations within a provider's services that attribute to those costs.

As more changes occur in health reform, many providers are realizing the key is in post-acute care (PAC) network development and an appropriate continuum of care. Therefore, it is critical that COR PT is proactive in meeting the demands of the changing healthcare environment and prepares for reimbursement changes. With a well established cardiac rehabilitation program in the clinic, an appropriately sized Medicare population, and operating at a current profit margin of 26.02%, COR PT is the best Duke University Health System affiliated physical therapy clinic to implement the proposed bundled payment pilot program (BP3). Cases of interest for this pilot include CABG's, PCI's, and AMI episodes. With the expected projections, the clinic expects to realize a savings, or additional profit, of \$9,219 per year. However, due to the volatility of case mixes, it recommended to implement this pilot in order to assess the true influence of a probable reimbursement change.

II. Introduction

The healthcare system in the United States is one of the most expensive healthcare systems in the world. Many point to our fee-for-service payment plans as one of the main culprits for the extensive health-care costs. In fee-for-service (FFS) payment plans, the primary way in which most healthcare facilities are reimbursed for their services, patients and their insurance companies are billed for each individual treatment/service performed on the individual. The problem is that patients often undergo and are billed for unnecessary treatments and services, leading to higher healthcare costs^{1,2}. A bundled-payment plan offers a solution to this problem by offering a “pay-for-performance” model.

In the bundled-payment model, a payer submits one payment for the entire episode of care (pre-surgery care, surgery, hospital stay, inpatient and outpatient rehabilitation, etc.). This lump sum covers the expected costs of a standard procedure and the rehabilitation services following it. If a patient recovers quicker and with fewer therapy sessions than expected, the provider often reaps a portion of the benefits of the savings. However, if the patient takes longer than expected to recover, the hospital/clinic must continue to care for the patient and the health-care provider loses money. This type of payment model rewards quality and value over quantity and volume of care.

Since bundled-payment models are a practical solution to ensure quality care, we propose to pilot a bundled-payment model in Duke Hospital’s Cardiac Outpatient Rehabilitation center for physical therapy (COR PT). In this proposed bundled payment pilot program (BP3), cases including percutaneous coronary intervention (PCI), acute myocardial infarction (AMI), and coronary artery bypass graft (CABG) placement will receive a bundled payment that includes post-acute care (PAC), including \$2921.00 allotted for physical therapy. Each patient is expected to complete on average 9 weeks of physical therapy, attending 3 sessions per week, for a total of 27 visits. Patients that make the appropriate progress before then will be discharged accordingly, and the clinic will make money. More complicated patients that take a longer time to recover will continue therapy until they reach appropriate standards for discharge. The clinic will likely lose money with these patients.

The goal of this program is to provide a model for the bundled-payment plan so that as health care reform evolves, Duke has experience in this type of model and it can be more easily applied throughout the rest of PAC ambulatory services. In addition, we hope to put emphasis on the quality of care rather than the quantity of care, in order to decrease the number of unnecessary interventions and increase the success rates of the interventions we do use.

There are four phases of cardiac rehabilitation including: acute, sub-acute, intensive outpatient, and independent ongoing conditioning³. At COR PT, we treat patients in the sub-acute and intensive outpatient phases, and we prepare the patients

to continue rehabilitation in the independent ongoing conditioning phase with a home exercise program tailored specifically to each patient. We monitor heart activity as we move the patient through different exercise progressions that focus on aerobic activity endurance, strength, and flexibility. At COR PT, we tailor specific protocols to the individual cardiac patient, advancing and progressing exercises as necessary but always prioritizing safety above all else. As an established clinic with an evidence-based protocol and good clinical outcomes already in place, COR PT is a perfect place to pilot a bundled-payment model.

Our Mission:

As part of a world-class academic and health-care system, we strive to set an example for all health-care systems and physical therapy practices by modeling a successful bundled payment plan in a physical therapy clinic. In addition, we strive to practice patient-centered rehabilitative care that progresses with current research from evidence-based practice and the newest technologies, and serve as an educational institution to improve the health and mobility of our patients.

Our Vision:

We seek to serve as examples in health-care, cardiac rehabilitation, and teaching to make a positive impact in society. We seek to do this by:

- Serving as an educational institution to up and coming therapists
- Providing patient-centered care to our patients
- Practicing evidence-based physical therapy
- Updating current physical therapy practices based on new research findings
- Attending conferences to share our ideas and learn about new research that can be applied to our practice
- Investing in technologies, tools, infrastructure, and people to provide the best care possible
- Providing an example of a successful bundled-payment model to help guide others as the healthcare system in the United States shifts towards the bundled-payment model

III. Industry and Demand Analysis

Market Demographics

Duke University Hospital is located in Durham, NC, primarily serving those in the immediate and surrounding areas including Durham, Orange, and Wake counties. However, Duke's prestigious cardiovascular and thoracic surgery program attracts patients from across the state and even from other regions of the country. COR PT is also located within minutes of Duke Hospital and serves the aforementioned counties. For the purposes of a BP3 at COR PT, the assumption is that the clinic's client base comes from Durham county, and one half of Orange and Wake counties.

These counties encompass a variety of ethnicities, socioeconomic levels, age levels and a host of other factors that make up a diverse demography of COR PT's service areas. Demographic information relevant to the proposed BP3 includes the following information. Trends in demographics can also be reviewed in **Appendix A. Demographic Snapshots.**

Table 1. Population Totals - The North Carolina Office of State Budget and Management (NCOSBM) has provided population totals for CY 2013 and forecasted a population change from 2010-2020. Durham, Orange, and Wake County population totals are expected to change 20.7%, 12.1%, and 22.7% over the decade, respectively. For COR PT's service areas, these forecasted population totals come to⁴:

County	2013	2014	2015	2016	2017	2018	2019	2020
Durham	286,210	292,191	297,807	303,972	310,264	316,686	323,242	329,933
Orange (½)	69,645	69,967	70,800	71,656	72,523	73,401	74,289	75,188
Wake (½)	482,467	492,655	502,684	514,094	525,764	537,699	549,905	562,388
Total	838,322	854,813	871,290	889,722	908,551	927,786	947,436	967,508

Table 2. Medicare Beneficiaries - HealthGrove, a health news and information site, provides information on Medicare Enrollees in the United States. Filtering through public data on Medicare usage rates, the number of Medicare participants were found for CY 2013. A 2.51% average growth rate was calculated and applied using information analyzed from The Henry J. Kaiser Family Foundation, a notable health policy research organization^{5, 6}:

County	2013	2014	2015	2016	2017	2018	2019	2020
Durham	35,487	36,378	37,291	38,227	39,186	40,170	41,178	42,212
Orange (½)	8,895	9,118	9,347	9,581	9,822	10,068	10,321	10,580
Wake (½)	55,761	57,161	58,595	60,066	61,574	63,119	64,704	66,328
Total	100,143	102,656	105,233	107,874	110,582	113,357	116,203	119,119

In addition to this information, there is an approximate 40:60 male:female ratio in all 3 counties in Medicare beneficiaries.

Given these population totals in COR PT’s service areas, it is clear that the large population supports the small clinic’s operations among other physical therapy clinics in the area. This is also shown through COR PT’s financial statements below. However, these would be gross overestimations for the purpose of the proposed BP3. It is important to assess cardiac episodes of interest that align with the physical therapy services provided at COR PT. Coronary Artery Bypass Grafting (CABG) and Percutaneous Coronary Intervention (PCI) procedures, and acute myocardial infarction (AMI) episodes are already being reviewed by many other hospitals through CMS BPCI and similar programs. Due to their prevalence in addition to the pending changes in reimbursement in healthcare, it is important for COR PT to consider these post-acute care episodes as well.

Incidence Rates

In order to more accurately assess the market demographics related to this proposed BP3, incidence rates for CABG, PCI, and AMI episodes must be reviewed. The Dartmouth Atlas of Health Care is a renowned project that has documented variations in how medical resources are distributed and used across the country. By using information available through the Dartmouth Atlas, incidence information can be found that is more relevant to the state of North Carolina and COR PT’s service areas.

The most recent and up to date information available can be found in Table 3. Incidence Rates per 1,000 Medicare Enrollees⁷.

Table 3. Incidence Rates per 1,000 Medicare Enrollees

	North Carolina	National Average
Inpatient Coronary Artery Bypass Grafting (CABG), by Gender (Gender: Overall; Year: 2012)	2.6	2.6
Inpatient Coronary Angiography, by Gender (Gender: Male; Year: 2012)	18.4	17
Discharge Rate, by Condition (Condition: Acute Myocardial Infarction; Year: 2009)	9.5	8.3

When applying this information to COR PT's service areas, an estimate of cases for each condition can be calculated for CY 2015. Of all the Medicare beneficiaries in Durham County, there are 97 estimated CABG cases, 274 PCI cases (not including females), and 354 AMI cases. In one half of Orange County, 2015 estimates are: 24 CABG cases, 69 PCI cases (not including females), and 89 AMI cases. In one half of Wake County, estimates are: 152 CABG cases, 431 PCI cases (not including females), and 557 AMI cases. In the clinic's service areas, this comes to a total of: 274 CABG cases, 775 PCI cases, and 1,000 AMI cases. Because it is assumed that cardiac rehabilitation is a generalized program that is implemented in the same manner for all 3 conditions, by combining all 3 types of cardiac cases, the total cases estimated for CY 2015 are: 726 patient cases in Durham County, 182 patient cases in one half of Orange County, and 1,140 patient cases in one half of Wake County, or an aggregate of 2,048 patient cases in COR PT's service areas (not including female PCI cases) that would be subject to the proposed BP3. A breakdown of this information can also be found in **Appendix A. Demographic Snapshots.**

Market Analysis & Competitive Landscape

COR PT is one of 13 Duke-affiliated physical therapy clinics, but is one of few that have a specialized program for Post-Acute Care Cardiac Rehabilitation (phases II & III). In addition, 2 of those 13 clinics have specialties that are intended to serve patients

with conditions that are non-cardiac related. This suggests that most, if not all, patients being seen at COR PT are for cardiac conditions. However, because the exact spread of market share in Duke's Physical Therapy clinics has not been assessed, an equal distribution of the 2,048 estimated Medicare cases subject to bundled payment across the remaining 11 clinics is assumed. This suggests that 186 patient cases may be seen in 2015 per clinic.

When reviewing the clinic's payer mix, it is reasonable to expect that it is a result of a combination between Duke University Health System's patient caseload and the makeup of COR PT's service areas. Limited by public data, it is assumed that the Wake County Outpatient payer mix is representative of the market area encompassing parts of Durham, Wake, and Orange counties. In addition, because COR PT primarily serves patients in DUHS, it is assumed that the clinic payer mix is somewhere in the range (average) between these two sources. The most recent payer mixes available to the public are for FY 2013 and estimated for COR PT clinic and are as follows^{8, 9}:

	DUHS	Wake County OP	COR PT
Medicare %	35.20%	33.30%	34.25%
Self Pay %	5.50%	11.00%	8.25%
Medicaid %	12.80%	8.40%	10.60%
Commercial %	40.20%	44.80%	42.50%
Other %	6.30%	2.50%	4.40%

Based on the clinic's capacity (including the No-Show/Late Cancellation rate) of approximately 267 patients, this indicates that COR PT sees about 92 Medicare patients per year. With the equal distribution of 186 patient cases per Duke-affiliated PT clinic that would support cardiac rehabilitation programs, it is clear that the market volume and demand supports the proposed BP3 at COR PT.

IV. Strategic Position

Duke University Health Systems

Duke Hospital is ranked sixth nationally in its cardiac department¹⁰. As a national leader, it is Duke's responsibility to implement change when necessary. The current health-care payment plan, fee-for-service, has been under fire for its abundance of unnecessary treatments and, therefore, high-priced care. It promotes quantity over quality, and does not reward quality care. In order to combat this, the bundled-payment plan has been created.

Reimbursement Forecast

Current health-care costs in the United States are skyrocketing. In the fee-for-service payment model, the most prevalent model used in the United States today, patients are billed for each individual service provided to them. Under the fee-for-service model, it has been found that physicians often perform services with little or no benefit to the patient, therefore increasing patients' costs while not improving their health. In addition, fee-for-service payment plans often add incentive for physicians to perform more expensive treatments because they are reimbursed more for them³. In order to combat these increasing health-care costs, hospitals and health-care providers have shifted towards using a bundled-payment model to reward quality of care over quantity of services provided to the patient. In the bundled-payment model, a patient pays a lump sum for an entire episode of care, regardless of the outcomes. It seeks to limit the amount of unnecessary services performed while optimizing the most effective and efficient treatments to the patient. Hospitals that are effective and efficient with their patients will benefit as patients are released earlier from care, while hospitals that perform unnecessary treatments will suffer.

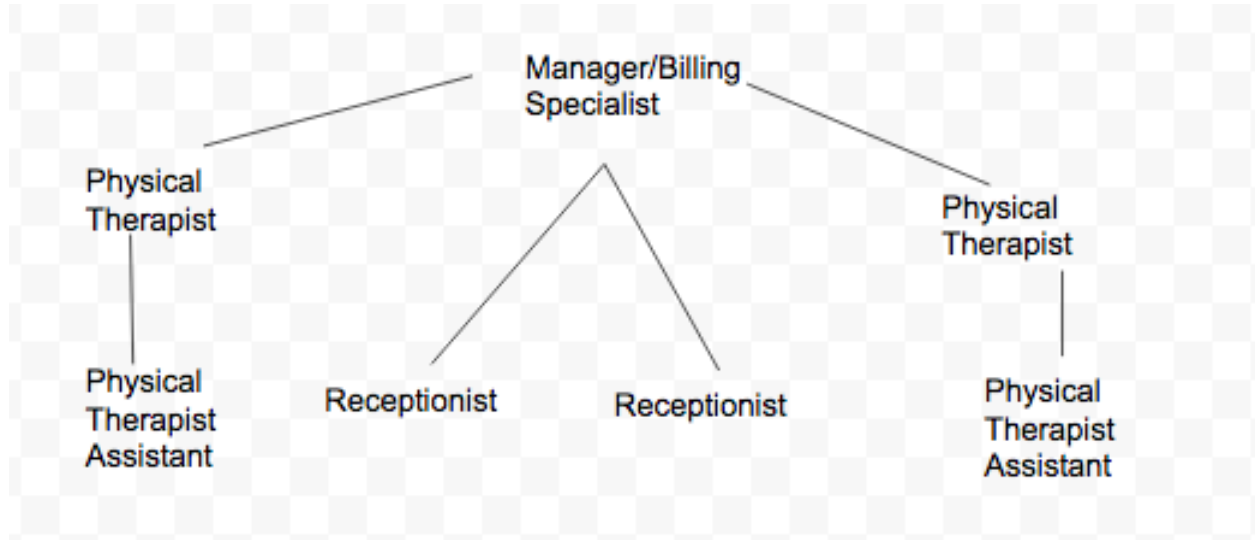
COR PT

Duke's Cardiac Outpatient Rehabilitation center for physical therapy (COR PT) is a great place to pilot a bundled-payment plan because it is an existing clinic that is already doing very well with a 26.02% profit margin. The break-even number of appointments needed per day is 23, a figure well below the actual number of patients seen per day (avg. 28.8). Since this clinic already has an established patient base, follows protocols for cardiac rehabilitation, and has a high profit margin, it is a good place to experiment. We chose to start with three of the most common heart procedures including acute myocardial infarctions (AMI), percutaneous coronary interventions (PCI), and coronary artery bypass grafts (CABG). If this system works

well, we will expand it to all coronary interventions before applying it to other departments with different episodes of care.

V. Operations

Organizational structure



Job Descriptions

Physical Therapist/Clinic Team Lead: Our physical therapists are expected to have a DPT degree from an accredited university and a license to practice physical therapy. They are responsible for all aspects of patient care, from the evaluation process to the treatment plan to patient and family education during treatment and following discharge. They are expected to continually assess and alter treatment interventions as the patient's condition progresses. Our physical therapists should be prepared to plan interventions for patients during all stages of life and debilitating health issues. They are responsible for directing, supervising, and providing guidance our physical therapist assistants as needed. Our physical therapists are expected to document all treatment interventions within 2 days of treatment. They are responsible for cleaning their treatment area after treatment, including changing the pillowcase, washing any tools that were used, wiping down the treatment table, putting any dirty laundry in the designated bins, and returning any equipment used to the correct place. We expect all employees to be prompt and to see patients as close to their appointment times as possible. We expect all employees to contribute to a positive and professional work environment. This therapist is also in charge of all clinical practice, which includes leading a bi-weekly rounds meeting with both PTs and PTAs to help stay up-to-date on research and share ideas among the clinicians.

Physical Therapist/Patient Care Team Lead: Our physical therapists are expected to

have a DPT degree from an accredited university and a license to practice physical therapy. They are responsible for all aspects of patient care, from the evaluation process to the treatment plan to patient and family education during treatment and following discharge. They are expected to continually assess and alter treatment interventions as the patient's condition progresses. Our physical therapists should be prepared to plan interventions for patients during all stages of life and debilitating health issues. They are responsible for directing, supervising, and providing guidance our physical therapist assistants as needed. Our physical therapists are expected to document all treatment interventions within 2 days of treatment. They are responsible for cleaning their treatment area after treatment, including changing the pillowcase, washing any tools that were used, wiping down the treatment table, putting any dirty laundry in the designated bins, and returning any equipment used to the correct place. We expect all employees to be prompt and to see patients as close to their appointment times as possible. We expect all employees to contribute to a positive and professional work environment. This therapist is also the clinical coordinator for this site, handling all the paperwork for students to work in the clinic and running a mentoring program for new graduate hires.

Physical Therapist Assistant: Our PTAs are expected to have a degree from a CAPTE accredited program and to have a license to practice. They are responsible for contributing to a positive and professional work environment. They are expected to be prompt and to see patients as close to their appointment times as possible. Our PTAs are responsible for carrying out treatment plans with our patients, progressing them as necessary and indicated, and educating the patient on proper technique and form. They are expected to seek the guidance of physical therapists and to have open and honest communication with everyone in the practice. Our PTAs are expected to document all treatment interventions within 2 days of treatment. They are responsible for cleaning their treatment area after treatment, including changing the pillowcase, washing any tools that were used, wiping down the treatment table, putting any dirty laundry in the designated bins, and returning any equipment used to the correct place.

Office Manager/Billing Specialist: Two years of management experience necessary. The office manager holds a supervisory role over the employees at COR. It is his/her responsibility to make sure each employee is effective and efficient with his/her patients and adheres to our productivity standards. S/he handles all money including payroll, paying taxes, buying supplies, and paying bills. The manager also makes sure the practice is presentable, purchases all necessary supplies, and handles all marketing opportunities for the practice. S/he attends meetings, plans outreach events, and creates opportunities to advertise the practice. In addition, the office manager is responsible for all billing inquiries. The manager must have a working knowledge of medical coding, work with patients, physical therapists, and insurance companies to

make sure all claims are paid and reimbursed, and be very familiar with the bundled-payment plan options as far as payment goes so that s/he can answer any questions from all parties involved. The manager is responsible for making sure each employee is up-to-date and complies with all regulatory requirements, including HIPAA/OSHA training, COBRA, hazardous waste, and fair labor standards act in conjunction with Duke's internal corporate compliance audit program. S/he is in charge of adhering to Duke's financial and regulatory standards, and hiring consultants as needed through Duke.

Receptionist: Must be proficient with Microsoft word and excel. Our receptionists are expected to schedule all patients, collect payments when necessary, and check the patients in as they come in. They are also responsible for answering the phone and sending/receiving faxes. The receptionists will be the patients' first glimpse into the practice, so it is important that they contribute to a positive work atmosphere. They are responsible for the waiting room cleanliness and keeping up with the coffee machine and candy tray to make sure they are never empty.

Financial Assumptions

Before implementing a bundled payment pilot program, some assumptions must be made in order to make projections on the financial impact. First, it is assumed that clinic operations will continue as normal for 8 hours a day, 40 hours per week. With two PT Team Leads, 2 PTAs, a clinic manager, and 2 administrative employees, the clinic productivity standards will remain the same. Each PT is expected to see 8 patients per day, including approximately 2 evaluations (initial or re-evaluation); each PTA is expected to see 10 patients per day. In the current state, the clinic has an approximate 20% No-Show/Late Cancellation (NS/CXL) rate. With each clinician provided a benefit of 2 weeks Paid-Time Off, this lends the clinic to a capacity of 9,000 visits per year; factoring in the 20% NS/CXL rate, the clinic projects 7,200 visits per year, or an average of 28.8 visits per day. According to the American Association of Cardiovascular and Pulmonary Rehabilitation (AACVPR), patients benefit most from 6-12 weeks of care. This suggests that on average, each patient is being seen for 27 sessions (3 times a week for 9 weeks)¹¹. Therefore, the clinic is expected to see approximately 267 patients per year.

While payment rates vary by payer, it is assumed that it is averaged out to match the Medicare Fee Schedule. In an initial evaluation, the clinic expects to bill 1 unit for the evaluation (97001) and 1 unit for therapeutic exercise (97110); for a re-evaluation, the clinic bills 1 unit for the evaluation (97002), 2 for therapeutic exercise (97110), and 1 unit for therapeutic activity (97530); for a standard treatment in cardiac rehabilitation, the clinic bills 3 units of therapeutic exercise (97110) and 1 unit of therapeutic activity (97530). Using APTA's calculator for CMS' Multiple Procedure Payment Reduction

(MPPR), a weighted average of the reimbursement for (initial or re-) evaluations is \$101.16. For a standard treatment, the reimbursement rate is \$109.91. Based on the expected number of visits each year, the average payment per visit is calculated out to be \$108.19 per visit.

Clinic Operations Projections

Assessing the expenses made by the clinic each year, COR PT has an average total cost (including fixed and variable costs) of \$85.85 per visit. This suggests that the clinic must provide 5,629 sessions per year, or 23 visits per day in order to break even. Given the projected number of visits per year, and the average payment per visit, the clinic expects to see a net patient care revenue of \$778,939. With a total operating expense of \$618,100, the clinic is currently generating a net income of \$160,838 per year, or a 26.02% profit margin. More detail of operating income and expense calculations can be found in **Appendix B. Financial Snapshots**.

Bundling Payments

The nature of the healthcare industry makes preparing for reimbursement changes challenging. It is clear that the FFS model leads to overutilization of health-care resources. The consequence of increased health care costs has been known to be unsustainable for years. Yet, despite this well-known dilemma, no one has found a generalizable solution to address the complexity of segmented health care delivery. While many programs exist (e.g. Medicare Shared Savings Programs with Accountable Care Organizations or Bundled Payments for Care Improvement programs) that are working towards new reimbursement models to align with quality and performance, much of this currently lacks the data to support the true impacts on health care. While the theory behind bundled payment programs are attractive, it is difficult to put into practice.

Currently, most people are aggregating Medicare claims data from CMS. For participants in CMS's bundled payment program, CMS provides historical claims data for all patients within the episodes of interest. Those claims provide individual line item detail of which patient saw which provider as well as the associated cost. This retrospective look allows systems to develop benchmarks and target price goals to aid in performance improvement. However, for providers who are not currently participants in these programs, or for those beginning to pilot such programs, preliminary access to the data is unavailable. Some hospitals are attempting to pull data from their own EHRs, but segregated systems across hospitals, physicians, and other health care settings make it nearly impossible. Others are deferring to purchasing claims data from large data analytical companies. Whichever approach providers choose, it is apparent across the board that internal organizational cost variations are difficult to analyze, let alone the

public availability of such data. For this reason, in time, the public reports from MSSP ACOs and CMS' BPCI programs will be able to provide valuable information that can guide providers in their own data-driven performance improvement.

When proposing and implementing a BP3, it is important to maintain and improve the quality of care delivered to all patients. Given COR PT's standard of care in affiliation with DUHS prominence in cardiovascular care, clinical practice is expected to remain unchanged, despite reimbursement changes in health care. Based off the average number of visits to be 27 per case, and an average payment of \$108.19, PAC bundled payment portions allocated to physical therapy should be \$2,921 per episode. The following highlights the forecasted impact on COR PT, given the current case mix.

Table 4. Bundled Payment Projections

PT Bundled Payment Portion	\$	2,921
Cost (expense) per Visit	\$	85.85
Pt Scenario 1: Simple		
Projected Visits		24
Savings (profit) per case	\$	861
Est Pt Case Mix (15%)		15
Est Savings	\$	12,910
Pt Scenario 2: Average		
Projected Visits		27
Savings (profit) per case	\$	603
Est Pt Case Mix (55%)		55
Est Savings	\$	33,173
Pt Scenario 3: Complicated		
Projected Visits		48
Savings (profit) per case	-\$	1,200
Est Pt Case Mix (30%)		30
Est Savings	-\$	35,989
Projected Savings per 100 Beneficiaries	\$	10,094
Projected Annual Savings	\$	9,219

An additional savings, or profit, of \$9,219 is clearly in the better interest of clinic operations. This would increase the profit margin from 26.02% to 27.51%. However, while this appears desirable, it is important to note the volatility of this financial scenario.

Limitations

Despite this profitable scenario, bundling payments are risky for health care operations, particularly when maintaining quality care for patients. Several estimations made in this analysis may prove to be futile if a shift in the market occurs.

For one, market data estimations are difficult to project because of variances between regions. Compiling this information takes time, indicating that the most recent information available is generally outdated. The most recent number of Medicare Beneficiaries by county available is for the year 2013. Only by applying an average percentage national growth rate (2.51%) in Medicare enrollees can an estimate be found for COR PT's service areas, but using a national average is likely inaccurate. Additionally, incidence data for the episodes of interest is not the most recent. CABG and PCI information from the Dartmouth Atlas is from 2012, and information on AMI episodes is from 2009. Further, PCI incidence rates are only available for male Medicare beneficiaries. However, because the male to female ratio in the clinic's market is 40:60, it can be expected that the estimate is conservative, due to the fact that female PCI cases are not included.

Next, the financial projections assume that all Medicare patients at COR PT are PAC Cardiac cases. While COR PT primarily specializes in cardiac rehabilitation for DUHS, some Medicare beneficiaries likely visit the clinic for non-cardiac conditions, due to the convenience of the location to Duke Hospital. Likewise, the assumption is made that the general cardiac rehabilitation protocol is appropriate and the same for all 3 episodes of interest (CABG, PCI, and AMI cases). The patient case mix of the clinic is perhaps the most volatile factor in determining the aftermath of bundling payments. Should complicated cases rise to 40% of the case mix, while average treatment scenarios reduce to 45% with simple scenarios remaining at 15%, then the profit margin of the clinic would drop to 24.85% as opposed to the current 26.02%. If 55% of patients require the average amount of 27 visits, and 45% of patients require more intensive care, this would result in a 3.08 percentage point reduction in the current profit. At the current state of COR PT, this may not be problematic in the near future; but on a larger scale, this could be destructive in a clinic's operations.

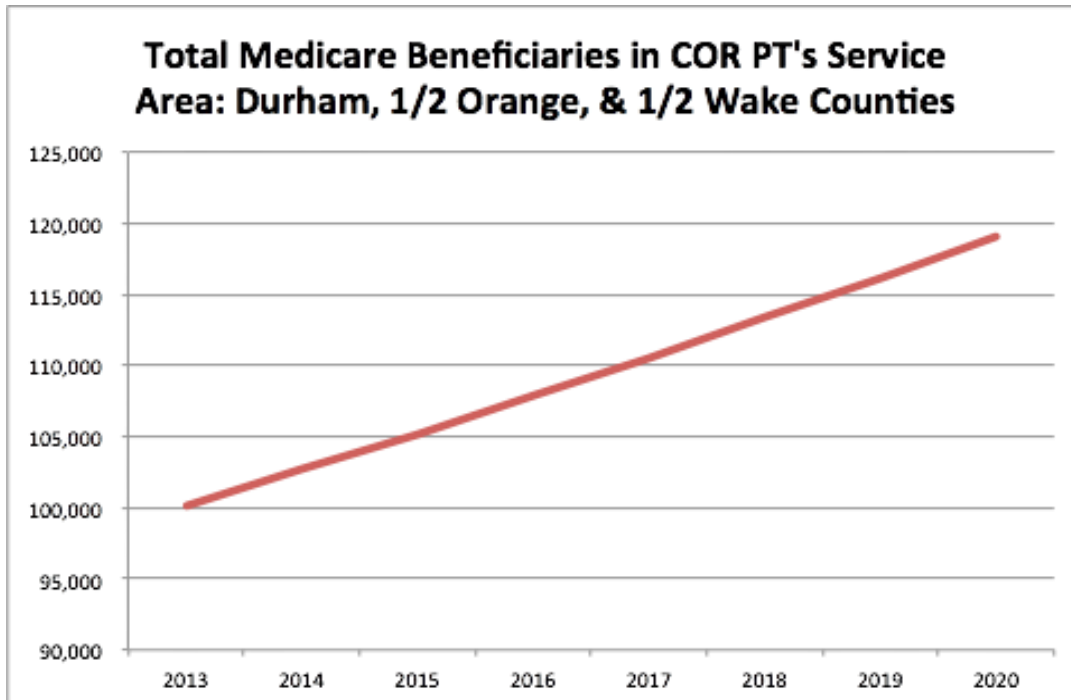
Finally, as health reform unfolds, it is becoming abundantly clear that reimbursement will only be reduced in the future. Payers are also likely to expect a portion of the saved amount. The proposed BP3 model operates under the current CMS MPPR rate for the average recommended amount of visits for cardiac rehabilitation patients, and does not include a shared savings portion.

Recommendations

For the several reasons outlined above, it is crucial that COR PT is proactive in the changing health-care environment. The effects of reimbursement changes, most likely resulting in reduced payments, can prove to be detrimental for the clinic's operations. Therefore, it is recommended that the proposed BP3 be implemented in order to assess the true financial ramifications. In this way, clinicians and administrators will have a guideline to collaborate on cost-savings and quality improvement efforts.

VI. Appendices

A. Demographic Snapshots



Projected Total Medicare Cases (CABG, PCI, AMI)	
	2015
Durham County	726
Orange County (1/2)	182
Wake County (1/2)	1140
Total	2,048
Est # of Pts per Duke clinic	186
Est # PT Treatments	5,026

Dartmouth Atlas Incidence Information		
Heart Episode	Per 1000 Medicare Beneficiaries	2015 Estimate
CABG	2.6*	
Durham County		97
Orange County (1/2)		24
Wake County (1/2)		152
	Total Cases	274
	Est # PT Treatments	7387
PCI	18.4**	
Durham County		274
Orange County (1/2)		69
Wake County (1/2)		431
	Total Cases	775
	Est # PT Treatments	20912
AMI	9.5***	
Durham County		354
Orange County (1/2)		89
Wake County (1/2)		557
	Total Cases	1000
	Est # PT Treatments	26992

*Dartmouth Atlas 2012 data

**per 1000 Male enrollees per Dartmouth Atlas in 2012

***Dartmouth Atlas 2009 data

B. Financial Snapshots¹²⁻¹⁵

In addition to the references used, average salary information was retrieved primarily from Glassdoor.com and Salary.com. The salaries include 2 PTs, 2 PTAs, 2 administration leads, and one clinic manager.

Salaries			Cor PT Payor Mix		Projected Pt Distr
PT	\$ 33.83	\$ 140,733	Medicare %	34.25%	91
PTA	\$ 21.83	\$ 90,813	Self Pay %	8.25%	22
Clinic Mgr	\$ 38.98	\$ 81,078	Medicaid %	10.60%	28
Admin	\$ 13.22	\$ 54,995	Commercial %	42.50%	113
			Other %	4.40%	12
Clinic Total		<u>\$ 367,619</u>		100.00%	267

Capital Expenses Breakdown		Useful Life	
3,000 sq ft clinic	\$ 300,000	39.5	\$ 7,594.94
Patterson Medical Supplies	\$ 132,876	8	\$16,609.53
Weights	\$ 1,187	TOTAL	\$24,204.46
Treadmills (4)	\$ 32,000		
EMG Machines (4)	\$ 58,000		
Exercise Mats & Equipment	\$ 2,365		
Cardiac Monitoring	\$ 4,760		
RCB (4)	\$ 8,796		
Nu-Step	\$ 5,010		
Tx tables (x4)	\$ 16,000		
Parallel bars	\$ 1,339		
Stairs	\$ 1,019		
Bodycraft Fxnl Trainer	\$ 2,400		

*Cost estimations retrieved from Patterson Medical Supplies and Triangle Real Estate Estimates

*Cardiac Monitoring equipment includes BP monitors, pulse oximeters, and stethoscopes

*Exercise Mats & equipment includes: mats, medicine balls, rebounder

Break-Even Analysis						
	Reimbursement					
Visit Avg	108.19					
OPERATING EXPENSES:						
Clinician Salary	\$	231,546				
Administrative Salary	\$	136,074				
Benefits (20%)	\$	80,876				
Medical Supplies	\$	12,000				
Office Supplies	\$	6,000				
Utilities & Maintenance	\$	12,000				
Laundry Expense	\$	12,000				
Other Operating Expenses	\$	12,000				
Insurance	\$	10,800				
Taxes	\$	65,000				
Mortgage	\$	15,600				
Depreciation & Amortization	\$	24,204				
Total Fixed Cost	↕ \$	576,100	\$	80.01		
Total Variable Cost	↕ \$	42,000				
Variable Cost/Tx	\$	5.83				
Total cost per visit	\$	85.85				
Cor PT						
Givens:	Reimbursement	X	Quantity	=	Total Fixed Cost	+ Variable Cost Unit
Visits	\$ 108		?	=	\$ 576,100	\$ 5.83
			?	=	5629	
				=	22.51	
					Visits per day	23.00

Profit & Loss - Year 20XX		
Projected Patients		267
Treatments per Patient		27
OP Visits		7200
Visits/Day		28.80
OP Revenue	108	778,938.70
NET PATIENT CARE REVENUE		778,939
OPERATING EXPENSES:		
Clinician Salary (PT, PTA)		231,546
Support Tech Salary (PT Tech)		-
Administrative Salaries		136,074
Benefits (22%)		80,876
Medical Supplies		12,000
Office Supplies		6,000
Utilities & Maintenance		12,000
Laundry Expense		12,000
Other Operating Expenses		12,000
Insurance		10,800
Taxes		65,000
Mortgage		15,600
Depreciation & Amortization		24,204
TOTAL DIRECT OPERATING EXPENSES		618,100
Net Income		160,838.82
Profit Margin		26.02%

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