At the Heart of Integration: Aligning Physicians and Administrators to Create New Value

Michele M. Molden, FACHE; Charles L. Brown III; and Bryan E. Griffith

Summary • Because of its ability to create real incremental value for patients and providers, physician–hospital integration will continue to play a major role in transforming the way healthcare is delivered. Integration is more than a transaction, and without developing the right culture, new integrated organizations will struggle to transform their current model of care. Confronted with regulatory and specialty-specific environmental forces, cardiovascular physicians have integrated with health systems at a higher rate than other specialties have. In 2007, Piedmont Healthcare launched Piedmont Heart as the first integrated cardiovascular care delivery program affiliated with a community healthcare system in greater Atlanta. Piedmont Healthcare had successfully brought together hospitals and cardiovascular physicians in an organizational structure that allowed for the right culture, resulting in true integration and patient-centered care. Today, Piedmont Heart is one of the largest physician groups in the United States focused on delivering high-quality outcomes, aligning multidisciplinary cardiovascular initiatives, and allowing for smart, strategic growth.

It has taken Piedmont Heart nearly five years to create new, incremental value from its center-of-excellence organizational structure, clinical pathways development, and Patient First program. Piedmont Heart had the advantage of starting earlier than many other physician–hospital integrated structures. As US healthcare moves from an industry driven by volume to one focused on value, it is organizations like Piedmont Heart that continue to drive smart integration forward and focus on innovation, despite potential disruption, that will be successful.
The US healthcare system’s multi-silo culture will not go quietly into the night, and breaking the bonds of this traditional and hierarchical design will not be an easy task.

Today’s US healthcare system is complicated by silos that segment payers, hospitals, and physicians. It is incapable of providing the type of integrated and coordinated care across a continuum that drives incremental value for patients and healthcare organizations. To truly transform the US healthcare system, greater alignment must occur between hospitals and physicians through clinical integration. Change of any significance is almost always disruptive to the system it affects, as the components of that system are forced to alter current processes. Physician–hospital integration is no exception, and even with strong evidence confirming its benefit, transformative integration can test the resolve of all parties involved.

Piedmont Healthcare (PHC), a not-for-profit, integrated care delivery health system in Georgia, recognized the potential to increase value through physician–hospital integration, specifically in cardiovascular (CV) services. In 2007, PHC created the Piedmont Heart Institute, now known as Piedmont Heart, an integrated entity based on a foundation of total alignment between physicians and hospitals. Initially forced to overcome numerous challenges, Piedmont Heart now serves as evidence that progressive innovation may initially be disruptive but ultimately delivers greater value to a health system and the patients it serves, and it is likely necessary to transform current models of care. The importance of breaking down silos in healthcare is broadly accepted, and the development of Piedmont Heart addresses only one type of silo. The US healthcare system’s multi-silo culture will not go quietly into the night, and breaking the bonds of this traditional and hierarchical design will not be an easy task.

PHC views the path to transforming healthcare as two evolutionary curves. The first curve, which we refer to as Curve A, represents the rise and eventual decline of an industry that makes no adjustments to address changing external forces and stakeholder demands. Curve A in healthcare is based on volume and is provider-centric, silo structured, and driven by fee-for-service payment. To remain viable, healthcare organizations must move to a new curve, a new way of operating—Curve B. This is the healthcare industry’s new model of success, based on value and integration that is patient- and population-centric and driven by global or bundled payments for the outcomes achieved.

The gap between curves is significant. Healthcare organizations must learn to optimize performance in the current environment (Curve A) while preparing to move to a new, innovative way of operating (Curve B). A powerful vehicle for change that spans curves A and B is physician–hospital integration. Integration is necessary in both curves and may be a prerequisite to transform healthcare delivery from Curve A to Curve B.

Physician–Hospital Integration

The term integration suggests a true alignment of vision and goals between multiple parties. Because organizational transformation requires an effectively integrated structure and culture, successful integration is much more than just a transaction between hospitals and physicians. MedAxiom (2013) describes the integration process as having three steps:
1. Transaction
2. Cultural integration
3. Creating value

Significant value from integration is gained only after the vision and goals of the integrated parties are aligned and a favorable and directional culture is established.

**Background**
The integration of CV physicians into hospitals and health systems has occurred as a result of national attention focused on the increased prevalence and resulting cost burden of CV disease in the United States. To lower costs, the Centers for Medicare & Medicaid Services significantly reduced Medicare reimbursement for CV imaging services. This reduction triggered the migration of CV physicians from the independent group practice model to hospital-based arrangements. A recent MedAxiom (2013) survey found a 253 percent increase in the percentage of CV physicians who integrated with hospitals between the spring of 2010 and the fall of 2012. At 53 percent of all respondents surveyed, more CV physicians are now integrated with hospitals than are not, with an additional 14 percent reporting that they are in the process of integrating.

**PHC’s Path to Integration**

**Overview**
In 2005, the Atlanta metropolitan CV service market was highly fragmented and competitive. At least three major health systems, including PHC, competed for CV market share. Multiple CV physician groups provided care across Atlanta, but few had significant geographic reach and even fewer were true CV multispecialty practices. Physician leaders from three prominent Atlanta-area CV groups began discussing potential integration strategies between their groups and between the groups and a health system partner. These physicians recognized that the other physician practices were not the enemy and, by working together, the combined group could create a more sustainable and more highly differentiated clinical practice that could achieve regional or national regard—a goal that would be extremely difficult to achieve as independent practices. Representatives of the three independent CV groups approached the then chief executive of PHC and told him they wanted to merge into a single group and were looking for the right health system partner. This visionary executive immediately let them know that PHC should be their choice.

PHC had a long history of positive physician relations through physicians’ inclusion on PHC’s governing boards and in other positions of influence. The organization considered its current and future relationship with physicians to be paramount and was prepared to offer employment to the interested parties. The strategy was a high-risk gamble because of the financial investment and the potential impact it could have on organizational culture, but it also could produce great reward for patients and the health system.

After much consideration and due diligence, in mid-2007 the PHC board of directors approved the partnership, and the new entity was formally established in October 2007. As part of the agreement, PHC acquired three CV practices, thereby employing 62 cardiologists and 650 staff, and committed ongoing capital to expand CV services at its flagship tertiary hospital in Atlanta, Piedmont Atlanta Hospital...
Piedmont Heart

Piedmont Heart is a physician-managed and physician-governed entity. The decision to adopt this physician-driven structure, and its corresponding demand for physician accountability, marked the beginning of the innovative decision making that propelled PHC and Piedmont Heart through the transaction and cultural stages of integration defined by MedAxiom and allowed the organization to create value early in its evolution.

As an independent entity within PHC, Piedmont Heart is responsible for comprehensive CV service line management, including strategic planning, CV physician recruitment, education, research, clinic operations, finance and accounting, human resources, the revenue cycle, quality performance, philanthropy, and education. PHC hospitals and Piedmont Heart share responsibility for hospital-based CV service line operations. As Piedmont Heart’s CV-related role within PHC expanded, it came to optimize capital investment, prevent the unnecessary duplication of services, and avoid unproductive internal competition.

Embracing Disruptive Innovation

The integration journey from Piedmont Heart’s inception to today was far from smooth. One of the first priorities for Piedmont Heart, and fundamental to its ability to move at a rapid pace, was to create a new Piedmont Heart culture, unique from the cultures of its founding physician groups and, in many ways, from the rest of PHC. The act of creating that culture was intentional and powerful, and the new culture was characterized by speed in execution.

While the rest of PHC found the upstart Piedmont Heart to be brash, reckless, and disrespectful of the traditions and rules of the old culture, Piedmont Heart saw the established organization as overly hierarchical, bureaucratic, risk averse, and slow to make decisions. Such conflict is expected in organizations that undergo disruptive innovation of this nature. After much dialogue, board interaction, conflict management, and some downright...
uncomfortable years, the partnership between the hospitals and physicians, and often between physician and physician, grew.

Piedmont Heart assumed responsibility for strategic and some operational CV decision making from PHC hospitals, including care processes, service rationalization, capital allocation, and physician recruitment. While decision-making responsibility shifted, income statement accountability between the hospitals and Piedmont Heart did not always correspond, resulting in a disconnect between revenue generation and the expenses necessary to drive that revenue.

This is a critical issue to resolve in the integration process. If the expenses required to operate the physician group are kept separate from the revenues they drive in the hospitals, there is a tendency to characterize these expenses as “losses.” Instead, the expense to employ the physicians and manage the enterprise should be viewed as an investment and, when aggregated with the corresponding revenue, can result in greater benefit for the whole than was possible before integration. Unless the expenses and the revenues are calculated together, the organization may not recognize the true value of the integrated enterprise. This lack of recognition leads physicians to feel that their contributions are not valued and others to incorrectly view the integrated organization as a financial burden.

PHC’s acceptance of Piedmont Heart’s role has increased as the system itself has focused more on integration and “systemness.” Many stakeholders, who did not see it before, now view the development of Piedmont Heart as a best practice for system service line development. For PHC, forming Piedmont Heart was an opportunity to create a sustainable care integration model that, once further defined, would serve as a model of clinical integration for other physician specialties.

Developing a positive new culture and integrating a physician-driven entity with hospitals can easily disrupt “the way we’ve always done it.” Care must be taken to ensure a newly created culture is not a counterculture that disrupts the old and new businesses to the extent that neither is successful. Once conflict is resolved internally, the value produced through innovative integration models will transform the current, unsustainable healthcare model and help shift providers to Curve B, where patients and other stakeholders experience greater value.

Innovations That Create Value

Three areas in which Piedmont Heart is already creating incremental value are its center-of-excellence organizational structure, clinical pathways development, and Patient First program.

Adopting the Center-of-Excellence Model

Piedmont Heart’s first major innovation was a patient-centric center-of-excellence (COE) design. Rather than organize by functional departments, like a traditional hospital organizational structure, Piedmont Heart physicians organized themselves along a continuum of patient care by disease state or condition. Piedmont Heart’s six COEs, shown as vertical bars in Exhibit 1, are Arrhythmia, Advanced Heart Failure, Coronary Therapeutics, General and Preventive Cardiology, Structural and Valvular Heart Disease, and Vascular.

Because of the matrix relationships inherent in Exhibit 1, Piedmont Heart has input
into most areas of PHC’s CV operations and administration. Every COE meets monthly to further cultural and operational integration in addition to collaborating on clinical and research priorities and tactical clinical issues. Each is led by a COE chief, who is accountable to a chief over all COEs. When physicians join Piedmont Heart, they select a “major” COE on which to focus based on individual interests, subspecialty training, and patient population served. Under certain circumstances, physicians may also participate in a “minor” COE. In a move toward even more comprehensive integration, physician extenders have recently been asked to form similar COEs.

COEs create a focused factory within a factory that results in real subspecialty depth of expertise and care standardization. For example, a physician who chooses to specialize in general cardiology is no longer allowed to perform even occasional interventions; similarly, an interventionist may no longer perform the occasional electrophysiology procedure. Furthermore, Piedmont Heart requires physicians to obtain subspecialty board certification to work in a major or minor COE.

Reducing variation in the type of care provided typically increases the quality of care and results in repeatability and reliability. At Piedmont Heart, moving away from “cardiac multispecialists” is necessary because the current state of complexity in medicine dictates that no one person can be an expert in many areas, and a shift toward specialization is operationally possible because of the organization’s scope and scale.

The COE structure brought physicians of similar specialties together and asked them to work as a team to identify and implement best practices. It took them away from the comfort of their legacy
physician group practice, and by focusing on the COE, they moved from a physician-preferred decision-making paradigm to physician team–driven decision making. The COE structure was originally designed to get similar-specialty physicians talking and actively engaged. Once those relationships were formed, Piedmont Heart had to decide

- what the groups should be talking about,
- how their efforts should be aligned with both Piedmont Heart and PHC organizational goals,
- how to support the groups, and
- how to measure performance.

Piedmont Heart’s administration now provides each COE with specific goals related to quality, education, definition of models and processes of care, and strategic growth. These goals include creating and implementing clinical pathways and furthering cultural integration and clinical education.

Piedmont Heart COEs have created new value for patients and the organization. For example, physicians within the Electrophysiology COE had once practiced eight different ways to dress a wound after an implant procedure. Variation was present not only between legacy physician groups but also within those groups. Through the COE approach of review of evidence-based literature, group discussion, and discernment, there is now one best practice approach.

Other organizations interested in adopting a similar structure should be realistic about the time needed to establish this type of structure and the necessary commitment of the physicians to achieve success. It is also important to select the right COE chief and identify the right focus areas early on so that COEs do not spend time developing lower-value solutions.

**Defining and Developing Clinical Pathways**

Piedmont Heart defines clinical pathways as comprehensive care management tools used across the inpatient and outpatient continuum of care. More than order sets, clinical pathways are meant to improve quality, reduce variation, and ensure appropriate care is provided efficiently. Essentially, a clinical pathway is a process flow diagram created from evidence-based guidelines and organizational standards or best practices for how to treat specific disease states.

PHC previously viewed clinical pathway development as order set development, and it measured compliance to clinical pathways by compliance to order set utilization. With the hiring of a director of clinical transformation in July 2011, Piedmont Heart began to take a broader view of what pathways were, how they were developed, and the value they could provide. Piedmont Heart’s work to develop pathways started with identifying variations in care processes within the COEs and then moved on to COE subcategories. Each COE treats multiple diseases, which have numerous possible approaches to treatment, and potentially as many opinions on how that treatment should proceed as physicians in the COE. To help organize and prioritize pathway opportunities, Piedmont Heart developed a “trunk and branch” structure, which works as follows: The trunk relates to a general disease state oriented to a COE, such as heart failure. From that trunk, branches of the disease subcategories multiply until finally
terminating in a detailed pathway, such as a left ventricular assist device versus cardiac resynchronization therapy device pathway. Because each pathway takes time and resources to develop, building an entire tree—trunk and branches—may take two or more years.

While processes were initially identified as variable on the subjective basis of perception, the approach quickly evolved to one that used objective data to identify the processes that actually suffered the most variation. Process variation is now measured by comparing physician-to-physician average resource utilization for a defined patient population. Through this analysis, Piedmont Heart identified specific care processes with significant variation that would benefit from implementing a standard pathway.

Once consensus was reached on a general plan for developing Piedmont Heart pathways, the organization spent approximately four months collecting, analyzing, and interpreting data on patient care variation; recruiting Piedmont Heart leaders and COE chiefs as champions; and scripting pathway development meetings and messaging to all stakeholders. COE chiefs presented the concept of pathways to their respective COEs, the process by which to develop them, and specific pathway opportunities for that COE. Then, with multidisciplinary support from every clinical and nonclinical group that was part of the selected care continuum, the COEs began the difficult work of crafting detailed pathways. Each Piedmont Heart pathway development effort follows a structured and consistent approach of planning, analysis, design, development, education, implementation, and monitoring quality and outcomes. Pathways are iterative, and both their content and the method for developing them are continually adjusted and improved.

The first pathways Piedmont Heart addressed were those with clear clinical variation and engaged COE members who were energized about and open to standardizing care to drive increased value. Quickly evident through this work was the need for physician and care team member education about what pathway development is and is not—particularly that it is not order set development. Order sets are helpful to implement a pathway through technology but simply serve as a way to direct care through various stages of the pathway. As true wins have been achieved, the pathway development program has experienced increased buy-in within Piedmont Heart and within other PHC entities.

Piedmont Heart expects to have developed at least seven CV pathways by July 2013. Examples of pathways already developed include same-day discharge (percutaneous coronary intervention), therapeutic hypothermia management for cardiac arrest patients, lipid management, and management of atrial fibrillation in cardiac surgery patients (Exhibit 2). Pathway work to date has focused on development; implementation is planned for the next fiscal year.

Depending on the process affected, pathways improve quality, cost, and revenue measures. Piedmont Heart expects to see significant cost reductions next year because of pathway implementation that reduces variation in care. Pathways are also expected to improve a variety of different quality measures that will be tracked separately. Once the pathways are imple-
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**Exhibit 2** Piedmont Heart Management of Atrial Fibrillation in Cardiac Surgery Patients—Clinical Pathway

<table>
<thead>
<tr>
<th>Definition</th>
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<tbody>
<tr>
<td><strong>Post-op AF</strong>: AF lasting more than 2 hours (STS) / AF associated with hemodynamic compromise independent of duration</td>
</tr>
<tr>
<td><strong>Low Risk CABG</strong>: CABG patient without hx of PAF or COPD / without antecedent AF (risk of post-op AF = &lt;15%)</td>
</tr>
<tr>
<td><strong>Medium Risk CABG/AVR</strong>: CABG patient with hx of PAF or COPD OR Aortic Valves (risk of post-op AF=15-30%)</td>
</tr>
<tr>
<td><strong>High Risk CABG/MVR</strong>: Mitral Valves OR AF with anti-arrhythmic therapy OR MAZE OR hx of AF without anti-arrhythmic therapy (risk of post-op AF = &gt;30%)</td>
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<table>
<thead>
<tr>
<th>Pre-op</th>
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<tbody>
<tr>
<td>* If patient is on Beta Blocker continue home BB until AM of surgery</td>
</tr>
<tr>
<td>* If patient is not on home BB, administer Metoprolol 25 mg PO BID at 10 AM and 10 PM (Do not administer if HR &lt;50 or SBP &lt;90)</td>
</tr>
<tr>
<td>* <strong>High Risk ONLY</strong>: Amiodarone 400 mg PO TID (once max dose of 10 g is reached, switch to 200 mg QD)</td>
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<thead>
<tr>
<th>Intra-op</th>
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<tbody>
<tr>
<td>* IV Magnesium 4 grams</td>
</tr>
<tr>
<td>* <strong>High Risk ONLY</strong>: Amiodarone bolus 150 mg followed by infusion of 1 mg/min (if no contra-indications) post cardiopulmonary bypass</td>
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<tr>
<th>Post-op: ICU Red</th>
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<tbody>
<tr>
<td>* Metoprolol to be administered at 10 AM and 10 PM</td>
</tr>
<tr>
<td>* IV Magnesium 2 g daily x 4 days total (check Mg level post-op day 2)</td>
</tr>
<tr>
<td>* <strong>High Risk ONLY</strong>: Continue Amiodarone infusion for the first 24 hrs @ 1 mg/min x 6 hrs, then decrease infusion to 0.5 mg/min x 18 hrs, then switch to 400 mg PO TID (once max dose of 10 g is reached, switch to 200 mg QD)</td>
</tr>
</tbody>
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<table>
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<tr>
<th>Post-op: 3 South</th>
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<tbody>
<tr>
<td>* Metoprolol to be administered at 10 AM and 10 PM. Extender or physician to determine daily dose based on BB sliding scale</td>
</tr>
<tr>
<td>* <strong>High Risk ONLY</strong>: Amiodarone 400 mg PO TID (once max dose of 10 g is reached, switch to 200 mg QD)</td>
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<table>
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<tr>
<th>Low, Medium and High Risk CABG: If Post-op AF noted</th>
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<tbody>
<tr>
<td>* <strong>Medication Management</strong></td>
</tr>
<tr>
<td>1. Diet status: NPO</td>
</tr>
<tr>
<td>2. Check Serum Potassium and Magnesium (ONLY check Magnesium Levels if Creatinine &gt; 2.0)</td>
</tr>
<tr>
<td>3. Magnesium 2 grams IV</td>
</tr>
<tr>
<td>4. 5 mg Metoprolol IV Q 10 min x8 (max= 15mg), if HR is &gt;100, increase next dose of Metoprolol PO</td>
</tr>
<tr>
<td>5. After 1 hour, administer 150 mg IV Amiodarone bolus</td>
</tr>
<tr>
<td>6. After 30 minutes, repeat 150 mg IV Amiodarone bolus</td>
</tr>
<tr>
<td>7. If patient remains in AF</td>
</tr>
<tr>
<td>i. Consult EP for cardioversion</td>
</tr>
<tr>
<td>ii. Begin Amiodarone infusion at 1 mg/min*</td>
</tr>
<tr>
<td>iii. Start the Heparin Low Intensity Protocol: NO BOLUS (No anticoagulation pre or post elective cardioversion for first 48 hours after CT Surgery due to surgical concern bleeding complications unless approved by CTS. Call CT Surgeon or EP MD with any clinical concerns regarding anticoagulation prior to starting therapy).</td>
</tr>
<tr>
<td>*Cardioversion: 8am-5pm: EP physician available for cardioversion 5pm-8am: Hold cardioversion till 8 am, if patient is unstable, follow ACLS protocol</td>
</tr>
<tr>
<td><strong>Contraindications for 4, 5 and 6:</strong></td>
</tr>
<tr>
<td>* HR &lt; 50</td>
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<tr>
<td>* SBP &lt; 90</td>
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<tr>
<th>Notes</th>
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<tr>
<td>* Antihypertensive medications to be given once Metoprolol 50 mg BID has been achieved (i.e. ACE/ARB).</td>
</tr>
<tr>
<td>* Must use 20 gauge IV access or larger when administering Amiodarone infusion.</td>
</tr>
</tbody>
</table>

Clinical pathways/guidelines are tools to facilitate and guide multi-disciplinary patient care. They do not represent a standard of care or replace physician orders or clinical judgment. Modifications are made based on documented individual patient needs.
We attribute Piedmont Heart’s pathway success to the physician–hospital integration model combined with strong physician collaboration and the management support to execute initiatives.

We attribute Piedmont Heart’s pathway success to the physician–hospital integration model combined with strong physician collaboration and the management support to execute initiatives. To sustain current accomplishments and allow for expansion, the Piedmont Heart pathway development team will soon add dedicated financial, case management, and information services resources. Pathway development is a noteworthy milestone in Piedmont Heart’s evolution because it underscores the commitment of the physicians who came from different legacy physician groups to work together toward agreement on the single best way to care for a patient.

Piedmont Heart’s journey to create clinical pathways continues today. The level of detail each pathway requires and the multitude of possible branches connected to a trunk provide ongoing opportunity to add patient value. Most current pathways have been specifically developed for PAH, the largest and most complex of the hospitals within PHC. In the future, Piedmont Heart pathway champions will work with all PHC hospitals to review applicable pathways, adjust them if necessary to accommodate fundamental and acceptable process variations, and support their implementation and maintenance. Piedmont Heart’s work on CV pathways is now considered best practice within PHC, and other clinical service lines are actively considering how to develop similar programs.

Putting Patients First

Most CV physicians divide their time among making clinic visits, performing office- and hospital-based procedures, reviewing diagnostic study results, and rounding on inpatients. That fragmented approach preserves the individual physician’s “ownership” of the patient, but it often results in inefficient time usage and does not encourage physicians to “play to their strengths” and work as an integrated team.

Piedmont Heart recognized that the quality of CV services at PAH, which made up at least 40 percent of hospital volume, could be improved, in part by minimizing the chances that physicians’ attention would be diluted by juggling multiple responsibilities. Additional focus was needed to improve patient outcomes, patient satisfaction, physician extender and other CV clinical team satisfaction, and the management of care throughout an acute episode. Toward this end, Piedmont Heart’s leaders sought to determine whether many physicians should continue doing many different activities, often during the same day, or if a few physicians should specialize in their area of greatest skill and focus their day on a single type of patient care activity.
After careful evaluation, Piedmont Heart’s leaders recognized the need to redesign the way care was provided in the hospital to put the patient first. The approach was to rationalize how physicians spend their time caring for patients through a coordinated medical care delivery team model. The resulting program, called Patient First, requires detailed coordination between Piedmont Heart and PAH, the physicians’ buy-in to the idea of trusting their partners to manage Piedmont Heart patients as a team, and establishment of clear roles and responsibilities for the entire medical care team. A physician may not always care for “her” patient, but she retains the patient’s overall care management. Each member of the clinical team had to understand his or her role in the care of a patient, with the CV physician serving as the “captain of the ship.” Patient First sought to improve CV patient care by decreasing inpatient average length of stay, decreasing inpatient readmission rates, decreasing admission time for CV patients from the emergency department, increasing patient satisfaction, and decreasing the rate of no-response-on-admit order status. All of these measures contribute to delivering a seamless continuum of high-quality patient care.

The Patient First program—probably the most dramatic change implemented through Piedmont Heart—provides dedicated CV coverage around the clock for PAH, similar to the way a CV hospitalist program would operate. Patient First physicians follow a master schedule that assigns them to specific CV service responsibilities in weekly rotations. First conceived in late 2010, Patient First ran multiple pilots starting in April 2011 before formally going live in January 2012. For such a drastic change in the way hospital CV care is delivered, from conception to implementation, the decision and development cycle time was very short. Patient First was successful because, as an integrated organization, Piedmont Heart was designed to allow quick and nimble decision making wherein all major stakeholders are at the table with common goals—uncharacteristic of a large institution that is vertically oriented.

Developing Patient First was a complex, patient-centric physician scheduling exercise. A sample schedule appears in Exhibit 3. Each week the schedule rotates. If they are not included in the Patient First weekly schedule, physicians are assigned to the clinic, operating or procedure rooms, diagnostic study reading schedule, or time off. This scheduling process helps Piedmont Heart utilize and balance its resources to avoid the potential conflict of multiple physicians trying to perform the same activity on the same day when physical capacity does not allow it and patient volume does not demand it.

Taking into consideration a matrix of resources, necessary tasks, and projected volume, Piedmont Heart’s Patient First program creates weekly physician schedules for Medical Cardiology, Interventional Cardiology, Electrophysiology, Cardiac Critical Care, and CV Imaging services. Each week, for the entire week, CV physicians are assigned to one of these services on the basis of his or her Piedmont Heart COE affiliation. Patient First physician scheduling is managed by a team of physicians and administrators who create the schedule based on physician preference and patient need. The scheduling team posts each schedule at least six months in advance and serves as the point of contact to manage scheduling request changes.
A willingness to explore disruptive innovation that may not fit within today’s model of care will become a key characteristic of successful healthcare organizations in the next five years.

By changing the fundamental approach to a week’s worth of work, Piedmont Heart allows a physician to focus attention on one or two activities rather than trying to manage multiple uncoordinated tasks related to a patient’s care. The physicians on the hospital units are available to answer questions from patients and families, support the nursing staff, and schedule and coordinate tests and discharges, thereby facilitating an efficient process of care and reducing unnecessary waiting or holding generally experienced by patients during inpatient stays.

Transformative care models often expand the role of nonphysician providers to reduce costs and increase efficiency and access. Given the need for better coordination across the continuum of care, potentially significant physician shortages in the coming years, demographic trends including the aging of the population, and potentially many more Americans gaining access to health coverage through health reform, physician extenders must be used to the full extent of their license. In Piedmont Heart’s Patient First program, physician extenders play a key role in enhancing coordination between multidisciplinary clinicians and support personnel. They contribute to more efficient and more standardized processes, patient education, and family communication. Physician extenders are critical to the success of Patient First and are scheduled to overlap with a physician to ensure continuity of care for the patient and effective handoffs between physician rotations.

The Patient First program ensures patient- and family-centered care and improves ease of access. Physicians find value in the program because it improves teamwork and communication. It creates shared accountability for CV patients yet preserves the personal patient–physician relationship. PAH has been very pleased with Patient First results and the service it provides to its patients and its clinicians, in part because having a CV physician available when needed aids timely decision making and education. Because of its success, Piedmont Heart will continue to optimize and expand the Patient First program. Opportunities to optimize the current operation include the following:

**Exhibit 3** Sample Patient First Rotation

<table>
<thead>
<tr>
<th>Week 1</th>
<th>Week 2</th>
<th>Week 3</th>
<th>Week 4</th>
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<td>MD 1 (75%)</td>
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<td>MD 3 (50%)</td>
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<td>MD 6 (25%)</td>
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<td>MD 7 (25%)</td>
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<td>MD 8 (25%)</td>
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*Actual rotations are determined by physician preference and patient need.*
• Expanding the program to weekends
• Improving the handoffs between weekly care teams from one week to the next
• Reducing the variations in care processes within and between the weekly teams
• Incorporating Piedmont Heart’s cardiac, vascular, and thoracic surgeons in a modified Patient First weekly schedule

Beyond PAH, the Patient First program can be expanded in a modified form to the other PHC hospitals for acute care and, eventually, to Piedmont Heart clinics across the health system to improve care along the continuum. Creating a program like Patient First requires an evolved and highly integrated physician–hospital relationship. A Patient First–type structure in a traditional practice model would significantly challenge that organization, so it is important not to attempt change of this nature until the culture of the integration effort has some tensile strength. Effective communication and change management are also required to support an initiative of this magnitude.

Potential for Further Integration
To date, integration at Piedmont Heart has focused on hospital-to-CV-physician, physician-to-physician within the same CV specialty, and physician-to-physician across CV specialties. Because of the comorbidities of many CV patients and the need for a team approach to care driven by the extensive specialization in medicine today, Piedmont Heart physicians will need to better and more formally collaborate and coordinate with non-CV physicians outside Piedmont Heart. Clinical pathway development is a multidisciplinary exercise that, as it expands, not only will require physicians from other specialties to assist in creating pathways but also, through standard processes and increased communication, will better align the various specialties. Piedmont Heart will soon be partnering with other PHC specialties in joint program development, such as Erectile Dysfunction with Urology, Lung Cancer Screening with Piedmont Heart’s Thoracic Surgery practice, and Women’s Heart Health Clinic with Obstetrics/Gynecology. Finally, as PHC focuses more on population health, Piedmont Heart will help to develop better vehicles to transition patients along the continuum of care and manage their health outside an acute care setting.

Lessons Learned and Conclusion
A willingness to explore disruptive innovation that may not fit within today’s model of care will become a key characteristic of successful healthcare organizations in the next five years. Innovative solutions to healthcare’s biggest and toughest challenges are not always workable or broadly accepted in today’s infrastructure, and even when successfully implemented they can be highly disruptive. At PHC, the real disruptive innovation of Piedmont Heart was putting physicians in charge of managing the clinical enterprise within the walls of the hospital. The direct involvement of physicians in all aspects of patient care, along with their administrative counterparts, improves quality and drives increased value. As physicians become “owners” of the process and outcomes, they make better clinical and administrative decisions than nonclinical administrators could possibly conceive or imple-
The direct involvement of physicians in all aspects of patient care, along with their administrative counterparts, improves quality and drives increased value.

By continuing to push innovative initiatives, such as patient-centric clinical integration, forward, even when it causes disruption, value will be created that was never possible in the old model of care.

In retrospect, the innovative disruption of Piedmont Heart might have been better mitigated if we had known how much disruption would be introduced. Piedmont Heart could have practiced better conflict management, more quickly broached difficult communication, and established a better set of expected outcomes at the start so that expectations regarding authority and accountability would have been better managed.

Overall, the experience of Piedmont Heart has enlightened PHC to the power and potential of alignment with physicians. It has produced a far better clinical product than was delivered prior to integration, as evidenced by better quality and service outcomes. Healthgrades has ranked Piedmont Atlanta Hospital as Best in Atlanta for overall cardiac care, cardiac surgery, and coronary intervention for two consecutive years. Piedmont Heart is proud to have more cardiologists ranked Top in the Nation by U.S. News & World Report than any other hospital in Atlanta.

Physician participation in improving clinical processes and structuring care delivery has truly transformed both the traditional physician practice and the hospital operation. In the near future, PHC will be taking what it has learned in CV and applying it to other clinical service lines.

Time is the integration regulator. Relationships cannot be built and innovations conceived and implemented overnight. They take time. It has taken Piedmont Heart nearly five years to create new, incremental value from its COE structure, clinical pathways, and Patient First program. While Piedmont Heart had the advantage of starting earlier than many other physician–hospital integrated structures, the organizations that keep pushing integration forward in a thoughtful way and continue to seek innovation, despite potential disruption, will be successful.

Reference