Children’s Hospital Value-Based Purchasing Strategy

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Research in Brief
As payers adopt value-based payment models, children’s hospitals are focusing on managing costs and improving patient outcomes by investing in care standardization, improving access to preventative and chronic care services, and managing care for complex pediatric patients. This brief profiles three children’s hospitals strategies for succeeding in a new environment of value-based competition.

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I. Observations

As markets shift from volume-based to value-based competition, children's hospitals must demonstrate quality and manage costs in both inpatient and outpatient care settings. To achieve these goals, many children’s hospitals are rethinking their care team structure and care protocols to improve value for all patient populations and manage health for high-risk groups. Administrators at three children's hospitals identified three key ways that children's hospitals can prepare for value-based competition.

**Imperative #1— Standardize care to promote appropriate and coordinated delivery**

To improve patient outcomes and manage costs, children’s hospitals must deliver evidence-based, standardized care. To redesign care processes for value, children’s hospitals must:

1. Invest in evidence-based research
2. Set appropriate goals for protocol development
3. Ensure systems for protocol auditing and improvement are in place
4. Gain physician support for protocol changes

Children’s Hospital C is promoting evidence-based care by developing hundreds of evidence-based care protocols, building them into their electronic order system, auditing their use, and making improvements as necessary. Children’s Hospital C aims to have 50 percent of their patients cared for using clinical standards over the next 1-2 year period. Children’s Hospital B has extended evidence-based protocols into their primary care network to manage chronic care patients effectively and consistently in outpatient settings.

**Imperative #2— Enhance preventative and chronic care services through primary care network development**

Children’s hospitals must also improve access to preventive and chronic care services. To accomplish these goals, institutions are developing easily accessible primary care networks. For example, Children’s Hospital B has continued to strengthen its already advanced primary care network by pursuing medical home certification. Effective patient-centered primary care networks, as exemplified by Children’s Hospital B’s Patient-Centered Medical Home, include:

1. Enhanced patient access and communication that fits with the patients’ cultural and linguistic needs
2. Proactive use of management tools and evidence-based guidelines to treat chronic conditions
3. Effective tools to track and monitor clinical performance outcomes

**Imperative #3—Coordinate care for complex patient populations**

Finally, children’s hospitals must coordinate care across both inpatient and outpatient care sites for complex patient populations to manage inpatient costs and decrease average length of stay.

Children’s hospitals are using a number of strategies for care coordination efforts. Children’s Hospital A has developed a virtual specialty medical home to improve patient outcomes by coordinating transplant care across the continuum. Children’s Hospital B has developed a complex care clinic and care coordination team. The complex care clinic ensures effective care management for chronic care patients in the outpatient space by dedicating a care coordination team to monitoring patient care between visits. Hospital C has created a high-end care management program which treats complex patients by developing care plans at schools, performing medical reviews, and coordinating behavioral health care management.
II. Research Methodology

The findings detailed in this report were drawn from interviews with the following sources:

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<thead>
<tr>
<th>Institution</th>
<th>Location</th>
<th>Facility</th>
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<tbody>
<tr>
<td>Hospital A (Profile A)</td>
<td>West</td>
<td>300-Bed children’s hospital</td>
</tr>
<tr>
<td>Hospital B (Profile B)</td>
<td>Midwest</td>
<td>350-Bed children’s hospital</td>
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<tr>
<td>Hospital C (Profile C)</td>
<td>Northwest</td>
<td>250-Bed children’s hospital</td>
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III. Profile A: Virtual specialty medical home advances care coordination

Hospital A is a 300-bed non-profit pediatric specialty hospital, which is part of a three hospital health system. Hospital A supports the local university school of medicine in their academic mission through pediatric research and teaching. Founded in the early 90s, Hospital A, is the youngest Children’s hospital ranked by U.S. News and World Report and the only children’s hospital in the northern part of their state listed within the top ten. In 2011, Hospital A and the medical school began a six-year renewal project to modernize and expand Hospital A to include 106 additional beds to total 361 patient beds onsite, replace the school of medicine facilities, and renovate of their main hospital pavilion to accommodate outpatient care.

Both the School of Medicine and Hospital A partner with a newly developed physician group whose members include primary care pediatricians, obstetrician/gynecologists and specialty care providers in the area. This physician group is a growing network of more than 400 physicians and clinicians.

Hospital A’s approach to value-based purchasing payment changes includes strategies to improve care coordination, decrease length of stay, and expand its outpatient network.

**Virtual specialty medical home model improves care coordination**

In order to promote care coordination and fill cross-continuum gaps in care, Hospital A developed a virtual specialty medical home which has found particular success with transplant patients. Transplant services are a natural fit for a medical home model largely because hospitals are paid on a case rate basis, allowing them greater flexibility in allocating resources across the full care episode. The team chose a virtual model in order to ensure access for rural patients, who often have inferior outcomes relative to urban patients due to lack of access to timely care for complications. Through this virtual specialty medical home, Hospital A’s Chief Medical Officer and head of their liver transplant program have developed outreach networks to serve patients with liver disease and have been able to bring rural patients outcomes up to parity with urban patients.

Hospital A hopes to develop similar models with more complex patients, which will be challenging given that many of these cases involve multiple organs and coordination across numerous service lines.

**Supportive housing and home visits reduce LOS and readmissions**

To improve care quality while managing costs, Hospital A has implemented three key strategies to reduce inpatient length of stay and promote care delivery at appropriate sites:

1. **Prelabor accommodation.** In response to the growing number of high-risk births, antepartum mothers who need to be monitored closely prior to their delivery are offered accommodation at an apartment close to the hospital. This model provides an alternate place to stay for antepartum mothers rather than being admitted into the hospital, which decreases total length of stay.

2. **Post-birth home visits.** Due to the lack of pediatric home care options, Hospital A recently began to offer home visits for new mothers and recent newborns post-hospital discharge. This new practice ensures that new mothers have the necessary post-acute follow-up care and decreases the potential for readmission.

3. **Post-transplant housing.** Hospital A partners with the Ronald McDonald house, which is typically used as a home away from home for families of children with life threatening illnesses who are being treated at local hospitals. In this case, the local Ronald McDonald house built a Bone Marrow Transplant wing, which provides children’s with severe immune system diseases a safe environment outside the hospital for recovery.

**Community partnerships and telemedicine drive outpatient network development**

To expand access to preventive care and improve care management for outpatient pediatric patients, Hospital A provides direct or remote access to specialty pediatric care providers through partnerships with Federally Qualified Health Centers (FQHCs) and community practices in their primary and secondary service areas. Hospital A partners with FQHCs for behavioral health care, obstetrics care, and general pediatric care.

Hospital A also uses telemedicine to expand access to subspecialties with significant physician shortages, such as pediatric neurology. Hospital A partners with neurology practices to deliver tele-health services to patients on the coast. These patients visit a community pediatric practice office, staffed by a nurse practitioner, and connect with a pediatric neurologist through this tele-network.
IV. Profile B: Reform strategy emphasizes wellness initiatives and outpatient network development

Hospital B, located in the Midwest, is the primary pediatric hospital in their city. With 350 inpatient pediatric beds, this hospital is also the pediatric teaching hospital for the local University School of Medicine. Recently, Hospital B began a number of expansion projects including the June 2012 completion of a new 12-story main hospital, which adds 750,000 square feet of clinical space and 225,000 square feet of research space. Once renovations are complete on the existing hospital, Hospital B will house 460 patient beds on its main campus and another 92 off-site newborn special and intensive care beds.

Across the past decade, Hospital B has experienced unprecedented growth. Patient volumes have more than doubled since 2000, with over 1 million annual patient visits today. The total number of employees has also doubled from 3,700 in 2000 to nearly 8,000 today.

Hospital B recognizes that under value-based payment models, providers will have an increased responsibility promote wellness within their patient community. To that end, Hospital B centers its value-based strategy on five key wellness areas.

Initiatives across five key wellness areas promote preventative care and decrease inpatient stays

To reduce unnecessary admissions and better manage chronic conditions, Hospital B has oriented their wellness efforts on five key areas.

Within each initiative, Hospital B has developed programs aimed to promote patient education and improve outcomes within both their health community and neighboring provider communities. Using countywide health statistics, Hospital B tracks their progress with each initiative by creating “Full Potential Community Reports”. These reports show 10 potential health threats that are prevalent for their county’s children. Indicators in these report cards are either green, yellow, or red to reflect progress against historical county, state, and national data.

1. **Obesity**: Hospital B has implemented a three-pronged approach to childhood obesity prevention and management.
   a. Hospital B’s CEO and Cleveland Clinic’s CEO co-lead the Healthy Choices for Healthy Children Council, a group of state leaders in business, health care, education, child advocacy, fitness and nutrition that are dedicated to preventing and decreasing childhood obesity. This group of leaders serve as statewide advocates for promoting nutritional food within the statewide public schooling system and keep educators abreast of new developments in science and nutrition.
   b. Hospital B’s Center for Healthy Weight and Nutrition provides programs for both prevention and treatment of overweight children.
   c. Hospital B’s Fitness and Nutrition (FAN) Club was developed in 2008 to help 3rd, 4th and 5th grade students participate in fun physical activities to keep them fit and healthy. This club offers free activities such as strength training, flag football, stretching, cardio-aerobic activities, and nutritional coaching.

2. **Asthma**: Asthma is the most frequent admitting diagnosis at Hospital B. On average 2,500 kids come to Hospital B’s ED for acute asthma, 700 of which are admitted for acute asthma. Hospital B’s Asthma & Allergy Clinic focuses on diagnosis and treatment of asthma. This clinic uses comprehensive asthma action plans to reduce the frequency of exacerbations and ultimately decrease ED presentations and admissions. Over the past year Hospital B has increased the rate of patients receiving asthma action plans from 40% to 80%.

3. **Pre-Maturity**: Hospital B partners with three regional hospitals and health systems, local government and community organizations to improve outcomes for high-risk pregnant women through the development of a statewide Better Birth Outcomes (BBO) Initiative. BBO established four programs to decrease the pre-mature birth rate Hospital B’s county. BBO established four initiatives to decrease scheduled births before the 39 week mark, promote family-centered care, educate new mothers, and encourage wellness and safe spacing of pregnancies. Since this program was
established, this coalition of providers has effectively decreased the number of non-medical scheduled deliveries before 39 weeks in Hospital B’s county from over 12 percent to 9 percent.

4. **Diabetes:** The percentage of children diagnosed with type 2 diabetes has increased from 5 percent in 1994 to nearly 50 percent in subsequent years. Hospital B manages 6 Metabolic and Endocrinology Clinics both on Hospital B’s Campus and across the state. Hospital B has a multidisciplinary care team dedicated to supporting patients and families effected by diabetes.

5. **Health Supervision:** Hospital B continues to develop their primary care network in order to improve access to health care, immunizations, and dental health. Hospital B’s primary care network recently received recognition as a Patient- Centered Medical Home by the National Committee for Quality Assurance (NCQA).

**Community, government, and provider partnerships further wellness initiatives**

Hospital B’s partnership strategy developed around these five wellness initiatives. Recognizing that Hospital B could not influence patient outcomes alone, strategy administrators developed partnerships to further advance their wellness initiatives. For example, Hospital B partnered with three other providers, government and community organizations to form a statewide Better Birth Outcomes (BBO) program to reduce Ohio’s premature birth rate. Hospital B also partners with other providers, state leaders, and community organizations to prevent childhood obesity through the Healthy Choices Healthy Children Coalition. This coalition is an advocate for public policy across the state that supports research-based solutions to the childhood obesity epidemic.

**Primary care network development focused on medical home model, evidence-based guidelines**

To keep patients well and ensure preventative care measures are in place, Hospital B developed a strong primary care network. Hospital B’s primary care network was awarded Patient-Centered Medical Home designation in July of 2012. Hospital B’s clinicians were recognized for their use of evidence-based patient centered processes to promote coordinated, long-term patient relationships. Hospital B’s primary care network particularly excels in four key areas:

1. Clinicians in the network provide enhanced patient access and communication that fits with patients’ cultural and linguistic needs.
2. Clinicians proactively use management techniques and evidence-based guidelines to treat chronic conditions.
3. Network administrators use appropriate tools to track and monitor clinical information, referrals, and test results in order to measure clinical performance.
4. The network uses information technology to manage patient prescriptions and coordinate care across settings through provider based information exchange.

Even following recent Patient-Centered Medical Home recognition from NCQA, Hospital B continues to develop its primary care network and plans to add two additional sites this year.

**Outpatient development promotes complex care coordination**

Hospital B recently advanced their complex care services, which include a complex care clinic and a care coordination team. The complex care clinic manages chronic care patients in the outpatient space, while a designated group of clinicians coordinates and monitors the patient’s care across sites and between visits. Hospital B’s care coordination services include a group of nurses trained in utilization management and discharge planning who collaborate with physicians and clinicians on discharge planning and coordinate appeals of denied insurance claims.

**Post-acute pediatric care gap remains a barrier to value-based approach**

Administrators at Hospital B recognize a gap in pediatric post-acute care services across the nation and within their state. Patients with chronic diseases, high needs at home, who are in many cases technology dependent, need specialized assistance and monitoring post-hospital discharge. Many parents, uncomfortable with taking on this responsibility, choose to keep their children in the hospital which increases the patient’s cost of care. Hospital B and several for-profit and non-for-profit organizations are strategizing on how to provide a home like environment, similar to a skilled nursing home, for post-acute pediatric care.
V. Profile C: Evidence-based clinical standard development is the first step to value-based shift

Hospital C is a 250-bed pediatric hospital, consistently ranked as one of the best children’s hospitals in the nation by U.S. News and World Report. Hospital C is the primary children’s teaching and academic research institute for the local University School of Medicine. Hospital C delivers care to residents in 25 states; 50% of patients are in-state residents.

Recently, Hospital C’s health care market has experienced significant consolidation. A large health system, which includes several hospitals across three states, will become part of the new regional health system formed by two large health systems in the West on June 30, 2013. The new integrated health system, which has not yet been named, will include twenty-one hospitals, a group of hospice and palliative care facilities, a network of clinics, physicians, and professional providers.

Hospital C focuses their value-based payment strategy on coordinating and standardizing care for complex pediatric patients through partnerships and outpatient network development.

**Evidence-based clinical standard development used to drive down costs and improve patient outcomes**

Hospital C recognizes that evidence-based care protocols can improve patient outcomes and help manage costs. Therefore, Hospital C is placing a heavy investment in clinical standard development, with the goal that 50 percent of Hospital C’s patients will be cared for using clinical standard, evidence-based protocols in the next 1-2 year period.

Hospital C is still in the early stages of this protocol development. In order to have the highest impact from this investment, Hospital C is first focusing their care standardization with procedures that are most common and have the highest volume at their institution. Clinicians and administrators develop hundreds of evidence-based care protocols, build them into their electronic order system, audit their use, and make improvements as necessary.

In addition to using these care standardization protocols for common, high volume procedures, Hospital C is also using care standardization to ensure high quality care management for complex patients. Hospital C performs randomized controlled trials of care protocols with a subset of highly complex patients, who are treated through their high end care management program (discussed in more detail in the next section). Hospital C performs randomized controlled trials for this group of highly complex patients, who have multi-systemic diseases, high care costs, and require care from clinicians across multiple service lines, in order to better understand care coordination processes and explore ways to better link providers across different care settings.

**High end care management programs emphasize inpatient and outpatient care coordination**

Hospital C recently established high-end care management programs in order to increase the quality of care for those top 10 percent of patients, whose costs are between 10 and 100 times that of health patients, annually. Patients treated in through these programs include those with multiple organ systems involved in their treatment. These programs standardize complex patient care and coordinate care across service lines and inpatient and outpatient care settings for complex patients. As part of these programs, a team of clinicians develop care plans at schools, perform medical reviews, and coordinate behavioral health care management.

**Investment in independent practice IT system connectivity drives patient-centered care**

Hospital C is linking IT systems across independent practices in their network to drive the necessary level of coordinated outpatient care through enhanced information exchange in order to have a positive impact on patient outcomes. To effectively link IT systems, Hospital C is using a phased approach. During phase one, clinicians and administrators will determine the appropriate level of connectivity between Hospital C and these practices to improve their ability to exchange information in real time. In phase two they will determine the appropriate platform and investment necessary to forge this connection.
Discussion with health plans for pediatric chronic care management unsuccessful to date

Market consolidation in the local market has led to an increase in partnership and affiliation discussions among providers, health plans, the state, and large practice groups. On a given day, 80 percent of Hospital C’s inpatient beds are occupied by lifelong chronic care patients. Due to the complex and expensive nature of these cases, Hospital C actively pursues conversations with health plans about opportunities to improve outcomes and care management. However, to date these conversations have yielded few results.

Hospital C faces several challenges in their attempt to partner with health plans:

1. **Lack of adequate data.** Hospital C has found it difficult to build a case for partnership with health plans because they cannot pull the necessary data to prove that their specialized expertise will drive down patient costs for these complex cases.

2. **Potential to increase cost per patient.** When these complex patients are put into care management programs, many times clinicians identify additional care that they need and essentially increase their costs, which ultimately increases the cost of care for the health plan.

**Limited volumes relative to adult facilities.** Due to the lower volume of pediatric complex patients in comparison to adult complex and chronic care, health plans are less inclined to partner with individual children’s hospitals for managed care payments. For example, although Hospital C hopes to establish a statewide program for cystic fibrosis, few health plan cohorts have more than 3-6 patients with cystic fibrosis.