Healthcare Systems and Services Practice

The new scale imperative for children's hospitals

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Recent trends are changing the scale equation for children's hospitals. However, the right new approach for each hospital will depend on its needs and strategic aspirations.

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Children's hospitals have historically shared a strategic model with three key elements: significant investment in specialized capabilities and pediatric subspecialty physician capacity, expansion of the pediatric footprint across nearby regions, and partnerships with nearby adult health systems (directed particularly at neonatal care and births). Building scale in this way has enabled the hospitals to better serve the needs of children in their extended communities. Indeed, this "Switzerland model" has made most children's hospitals the center of large pediatric networks and enabled them to grow successfully, and has allowed many to remain freestanding entities in a world of broader provider market consolidation.

Several trends, however, are changing the equation for children's hospitals and create a new set of questions for them. For example:

- Will the historical acute care-focused, subspecialty approach to scale be sufficient to allow children's hospitals to thrive in the future?
- Given market pressures, how will children's hospitals be able to sustain or build the financial engines and investment capacity needed to continue to execute on their missions?
- How can children's hospitals more effectively create the scale required to build distinctive clinical programs, manage populations, and generate cutting-edge research?
- How should children's hospitals think about the changing nature of partnership and its role in protecting and sustaining their mission to deliver the highest-quality care for children?

In this paper, we discuss why scale is becoming increasingly important for children's hospitals, outline the four areas where scale is becoming especially critical, and explain how (and why) children's hospitals should develop their approach to scale in the context of their strategic aspirations.

The growing scale imperative

Until comparatively recently, children's hospitals have been insulated from many of the market forces shaping provider economics in the United States—in part because pediatric care represents a low portion of overall healthcare spending, but also because payors and communities tend to resist restrictions on care for children. Several trends, however, are challenging the growth and margin picture for children's hospitals, raising concerns about their ability to fund the components of their mission that are critical for children's health but do not necessarily generate margin (e.g., clinical programs development, research, teaching). In some cases, these trends may require children's hospitals to rethink their independence. The trends include factors

that could constrain growth in certain markets or that could increase pressure on reimbursement rates or consumers' willingness to pay.

Declining birth rate. General fertility rates in the United States have decreased to 62 births per 1,000 women aged 15 to 44 years—the lowest rate since the measure began being tracked in 1909.[1] The decrease is partly due to the rise in the average age at first birth.[2] As a result, the pediatric population in some markets is not increasing, constraining growth for local children's hospitals.

Continued competition from adult hospitals for high-margin neonatal and pediatric services. Despite declining birth rates, the build-out of high-acuity neonatal and pediatric capacity, particularly neonatal intensive care units (NICUs), has persisted in many markets. In California, for example, the number of licensed NICU beds increased by about 30% between 2004 and 2014, even though the total number of in-hospital live births decreased slightly (by less than 1%) during that time.[3] Furthermore, some adult hospitals are developing subspecialty pediatric capabilities.

Pressure on Medicaid funding. The new administration has indicated a desire to "maximize flexibility for States in administering Medicaid, to enable States to experiment with innovative methods to deliver healthcare to our low-income citizens."[4] Changes to overall Medicaid funding (e.g., through repeal or revision of certain ACA provisions and/or the use of per capita caps or block grants) could reverse the membership gains that resulted from expansion and squeeze the money remaining for original enrollees. The resulting pressure on state budgets could limit reimbursement to Medicaid providers, including children's hospitals.

Narrow networks and tiering of health insurance plans. The McKinsey Center for U.S. Health System Reform estimates that only 23% of the ultra-narrow network plans and 61% of the narrow network plans offered on the 2017 public exchanges include access to a children's hospital (typically, because of the hospitals' high cost).[5] To date, access restrictions have largely been limited to on-exchange plans, which cover a relatively small number of pediatric lives. Although no commercial payors have announced plans to exclude children's hospitals from the networks in their group insurance plans, some of them may view the exchanges as testing grounds for new product designs that could eventually be used in group insurance plans.

Rise of consumerism in children's healthcare. Parents now, more than ever, can exercise choice in healthcare and "shop" around for what they value most. Easier access to information on care quality and outcomes achieved is empowering families to make informed healthcare decisions and accept trade-offs among product features, sites of care, and treatment options. Staying ahead of consumer pressure requires innovation in services and outreach.

These trends could make growth more difficult for many traditional acute care-focused children's hospitals and reduce overall clinical margin. The margin pressure often translates to pressure on funding for clinical program development, innovation, research, population health management capabilities, and other priorities. The conclusion seems clear: children's hospitals,

[1] CDC. General fertility rates. May 17, 2017.
[2] CDC. Mean age of mothers is on the rise: United States, 2000–2014. NCHS Data Brief No. 232. January 2016.
[3] McKinsey analysis of data from the California Office of Statewide Health Planning and Development.
[4] Trump-Pence Transition Team. *Healthcare.* Dec. 13, 2016.
[5] McKinsey Center for U.S. Health System Reform. Hospital networks: Perspectives from four years of the individual market exchanges. May 2017.

in the near term, should consider how they can build more efficient types of scale (from both a financial and quality perspective) to ensure future sustainability and impact.

Developing a scale strategy

For children's hospitals, developing a scale strategy requires them to identify their aspirations for the future, consider the various types of scale that could potentially allow them to achieve those aspirations, and then determine what type of scale will add the most organizational value.

Identifying aspirations for the future

In setting aspirations, a children's hospital should first decide how and where it intends to focus its impact on children's health. A spectrum of options in three categories can be considered (Exhibit 1):

Integrated community pediatric health system: a community-focused hospital that advances children's health by creating an integrated delivery network designed to improve both outcomes and the patient experience. This type of system focuses on a well-

EXHIBIT 1 **The spectrum of strategic models for a children's hospital**

	1 Integrated community pediatric health system	2 Regional player with research and high-acuity focus	3 National player with academic and global focus
Focus of impact	• Population health • Integrated delivery networks • Strong service line offerings	• Regional prominence • Leading market share • Strong service line offerings • Academic and research affiliations	• National/international prominence • Broad service line offerings • Academics and externally funded research
Recent investments	• Campus expansion • Transport development	• Translational research and innovation • Site additions (e.g., ambulatory care, new clinics) • Community advocacy	• Cutting-edge research (e.g., genomics) • Digital innovation and technology • Physician training internationally
Ranked specialties	• 4 to 6 ranked specialties (typically, outside the top 30 children's hospitals in each)	• 8 to 10 ranked specialties (typically, outside the top 10 children's hospitals in each)	• 10 ranked specialties (typically in the top 5 or 10 children's hospitals in each)
Assets[1]	• $1 to 2 billion	• $2 to 3.5 billion	• >$4 billion
NIH funding[2]	• ~$0 million	• ~$5 to 20 million	• >$70 million

[1] Based on GuideStar reports and annual reports, some reporting 2015 fiscal year.
[2] Based on 2017 reports.

Source: *U.S. News & World Report*; National Institute of Health's RePORT; hospital websites; Guidestar

defined, often small geographic area, and puts its emphasis on its clinical and population health capabilities (typically, not on research and teaching). In many cases, it also emphasizes operational efficiency to support the delivery of affordable care to the local population.

Regional player with research and high-acuity focus: a research-focused hospital designed to serve a larger but still discrete geographic region. This type of children's hospital emphasizes not only its clinical and population health capabilities but also its academic prowess and research affiliations to encourage innovation and discovery in key clinical areas.

National/international player with academic focus: an academic, research-focused hospital that serves its local market but also offers specialized care to high-need patient populations nationally or globally. This type of hospital often drives leading-edge innovations in a number of diverse clinical areas.

For a children's hospital that has not yet established itself in any of the above categories, it is important to affirm an overall direction before considering questions related to scale, given the significant differences in focus and priorities among the categories. Having clarity of direction is a prerequisite to defining the strategies, investments, capabilities, and scale required to be successful. For a children's hospital that has already established its position in the market, aspiration setting should focus on how it can better differentiate itself from other children's hospitals or adult systems serving the same regional patient population or offering the same clinical programs.

In all cases, aspirations should be based on a medium-term time frame (e.g., five to ten years) and an honest internal assessment of the hospital's starting capabilities and financial position. In addition, the hospital must consider what additional capabilities it will need to achieve its aspirations and whether it can afford to acquire those capabilities. These factors—the approach selected, points of differentiation, capabilities required, and financial position—should then inform decisions about the type and amount of scale required.

Considering the types of scale

For all health systems, including children's hospitals, scale can mean a number of things—from the minimum patient volume required to access traditional economies of scale and drive margin (e.g., efficient administrative infrastructure) to the minimum viable scale for effectively managing payor risk for a population.[6] Again, there is no single right answer; different aspirations require different types and degrees of scale. In all cases, however, the type of scale should enable children's hospitals to improve their financial efficiency (or risk mitigation) while also ensuring high-quality care.

Scale can be sought in four areas: clinical programs, population health, research, and nonclinical operations. In each case, achieving scale can deliver significant benefits (Exhibit 2).

However, building scale in any of the four areas (the choice depends on each facility's aspirations) can help children's hospitals achieve the level of operational and infrastructure efficiency needed to help offset the impact of today's major market pressures.

[6]Lichtenberger S et al. Provider scale strategies: The evolving landscape. McKinsey white paper. September 2016.

EXHIBIT 2 **Important dimensions of scale for children's hospitals**

Type of scale	Definition	Reasons to pursue	Example aspiration
Clinical/ patient volume	Patient volume (at a program level) seen in clinic, hospital, and telemedicine settings	Achieve higher care quality through increased volume in specialized programs	Obtain **90,000 more patients in network** to increase hospital procedure rate from 2/year to 20/year and decrease surgical mortality rate by 15% to 20%[1]
		Subsidize other strategic missions through revenue increases	Achieve **1,000 additional inpatient admissions** to make $10 million to $20 million in additional revenue available to subsidize other missions[2]
Population	Population health network of patients and physicians	Better manage total cost of care through development of population health expertise	Manage **critical mass (e.g., 5,000+ lives)** of high-need patients to significantly reduce inpatient admissions and days[3,4]
		Improve patient flows by creating hospital-led health plan	Obtain **40,000–50,000 Medicaid lives to be covered by a hospital-led health plan** that could develop into a Medicaid children's hospital-led health plan[5]
Research	Volume of researchers, physicians, patients, and funding needed to conduct research successfully	Obtain a critical mass of researchers and patients to study rare diseases	Develop **relationship with other facilities** and, possibly, a pharmaceutical company, to study pediatric conditions that affect only a tiny percentage of children
		Increase access to outside funding	**Recruit 3 well-established principal investigators** to obtain up to $4 million in additional NIH funding per year[6]
Operational	Maximized use of resources and back-office functions	Improve operational efficiency to reduce cost of delivering good clinical outcomes	Achieve supply costs of **~$450/adjusted admission (AA) for a 60,00-AA system** or of **<$400/AA for a 400,000-AA system**[7]

NIH, National Institutes of Health.
[1]Hirsch JC et al. Hospital mortality for Norwood and arterial switch operations as a function of institutional volume. *Pediatric Cardiology*. 2008;29:713-17. (This study showed that hospitals performing at least 20 of these procedures annually had markedly lower mortality rates than did hospitals performing only two procedures per year.)
[2]Assumes $10,000–$20,000 contribution margin per inpatient admission.
[3]Weier RC et al. Partners for Kids care coordination: Lessons from the field. *Pediatrics*. 2017;139:S109-16.
[4]Song PH et al. How a pediatric ACO coordinates care for children with disabilities. *NEJM Catalyst*. July 28, 2016.
[5]McKinsey expert estimates.
[6]Maximum allowable NIH funding for a single principal investigator is 21 points (equivalent to ~$1.4 million or 3 research project R01 grants).
[7]McKinsey analysis of supply chain data.

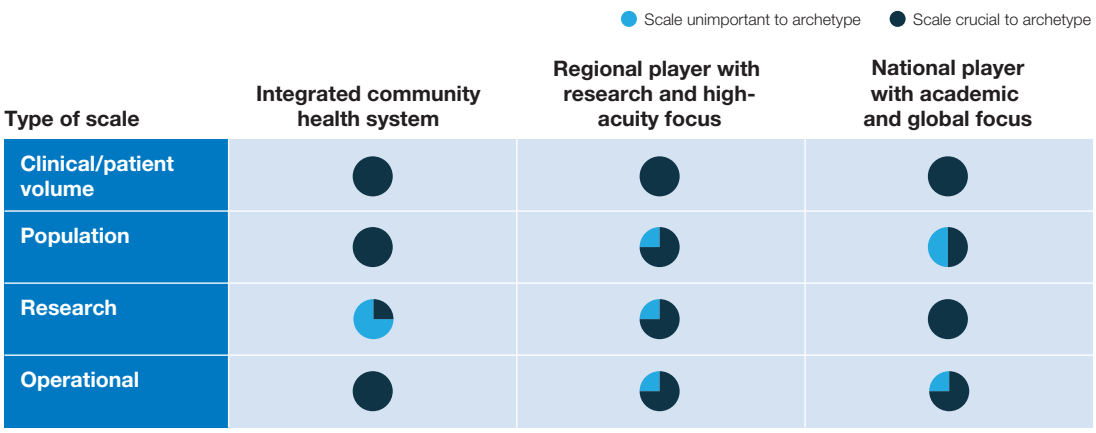
Matching scale to aspirations

Once a children's hospital has determined its strategic path, it must decide the type(s) of scale it will need to achieve its aspirations and then assess the investments, capabilities, and time needed to build scale in those areas (Exhibit 3). Depending on a hospital's starting point and aspirations, it might decide to put primary focus on one or two of these areas (the different types of children's hospital require different areas of emphasis from scale).

In most instances, however, clinical scale is necessary to generate both the quality and financial outcomes that will enable the hospital to pursue other capabilities and missions. For an integrated community pediatric system, clinical scale might entail not only sufficient inpatient volume to deliver high-quality acute care programs but also sufficient overall number of covered lives to take on risk-based arrangements with payors. National/international players that also have a focus on population health will need scale in all areas (e.g., they may need to acquire additional outpatient volume to ensure that they can develop the level of expertise in population health that they already have in acute care). For all children's hospitals, greater clinical scale can support a virtuous circle: the additional revenue it brings in can enable the hospitals to invest in new capabilities, which would then allow them to increase the efficiency of their operations, permitting them to provide specialized care to more children.

After the hospital has determined its strategic aspirations and the types of scale required to succeed, further analysis is required to identify the ways in which the needed scale can be built. For example, clinical scale could be derived from additional strategic partnerships, a new comprehensive organic growth strategy, or more targeted service line-focused growth initiatives. Accurately identifying the gap between the needed scale and the hospital's starting position makes possible a realistic discussion about how scale can be obtained, especially whether it will be feasible to build that scale internally or whether external partners will be required. For example, a hospital

EXHIBIT 3 **Each archetype requires different types of scale**



that wants to pursue a regional research and high-acuity model but does not yet have a robust research program needs to investigate the factors underlying the difference between the program's current and aspirational performance. It could have resulted from a variety of causes, including a lack of funding (from the hospital or external sources), a limited number of patients with rare conditions, or the absence of a critical mass of researchers, especially those with the multidisciplinary expertise needed to address increasingly complex research questions. Understanding the specific cause can allow a children's hospital to make a fact-based assessment of its options for filling gaps and achieving the required scale.

Building scale through a "New Switzerland" model

Achieving the level of scale that will allow children's hospitals to continue to compete effectively and execute their multipart mission may require considerable investment. Given their different financial positions, some children's hospitals will find this investment more difficult than others. Furthermore, all children's hospitals will need stronger linkages with other players in the healthcare ecosystem if they are to succeed in the future. In short, children's hospitals need an enhanced Switzerland model that gives them additional, tighter structural relationships. This new model can provide a number of benefits, including greater consolidation of patient volume to improve care quality, pooling of resources to reduce duplication, and the ability to invest and take on risk in population management initiatives.

Several examples of the new Switzerland model are present in the market today, including:

Nationwide Children's Hospital and University Hospitals Rainbow Babies & Children's: In 2015, these institutions partnered to form the Congenital Heart Collaborative so they could establish a combined, stronger heart program at both hospitals.[7]

Phoenix Children's Hospital and St. Joseph's Pediatric Hospital: In 2011, these organizations combined operations under a joint venture model. As a single operating entity, they have avoided the need to build new in-market facilities (as they had been planning to do) by taking advantage of unutilized capacity at both sites.[8]

Children's Hospital (Omaha) and University of Nebraska College of Medicine: In this case, both the hospital and the university's faculty practice had their own specialty pediatric physician groups. In 2007, these groups were merged into a children's-focused multispecialty group. Combining the physician groups made it easier to increase the faculty size, providing the support needed to launch new pediatric services and training programs.[9]

Today, almost all children's hospitals are aspiring to build, or to deliver more impact from, their clinical programs, population health efforts, and research and operational enterprises. New partnerships can help them do this by enhancing both the pace of progress and return on investment. A variety of partners can be considered, including local, regional, national, and international options. The choice should depend on a hospital's aspiration and the gap(s) it needs to fill to ensure that the partnership achieves the required scale and performance improvements.

[7] Nationwide Children's Hospital. University Hospitals Rainbow Babies & Children's and Nationwide Children's Hospital report a successful first year of The Congenital Heart Collaborative. August 30, 2016.

[8] Stanton A. Bob Myer's vision revitalized Phoenix Children's Hospital. In Business (Greater Phoenix). October 2011.

[9] O'Connor T. UNMC/Children's partnership takes next step. University of Nebraska Medical Center Newsroom. June 18, 2008.

Questions to consider to set a partnership up for success

Be clear about benefits

- What are the specific ways a partnership could improve the ability of a children's hospital to fulfill its mission and expand access to high-quality care? For example, could the partnership:
  - Generate increased financial strength through cost synergies and/or greater success with philanthropic efforts or grant approval?
  - Increase patient volumes and enable improvement in care quality?
  - Help bring best-in-class physicians to the hospital? Drive innovation/research?
  - Fill service line gaps, enabling both partners to offer a full continuum of care through one system and improve coordination?
- If the preferred partner is an academic organization: Could the partnership improve the hospital's ability to measure outcomes and innovate, and provide access to cutting-edge treatments?

Be thoughtful about interdependencies

- How are key stakeholders—especially the hospital's physicians, regulators, referral partners, payors, and patients—likely to respond to the partnership? To answer this, additional questions must be considered.
  - Will there be implications for physician governance, compensation, or benefits? If so, is there a risk of physician flight?
  - Might regulatory bodies oppose the partnership on the grounds that it reduces competition?
  - Will other healthcare systems resist the increase in market consolidation and direct referral volume away from the new entity?
  - Could the other systems lobby to block the deal through antitrust lawsuits or bed moratoriums?
  - What is the best messaging strategy for broadly communicating the benefits of the partnership, including its impact on care quality?
  - How can all key stakeholders be engaged throughout the process to ensure their concerns are heard and addressed?

Ensure a balanced and equitable deal structure

- How can the partnership structure be tailored to the realities of each partner and the deal at hand? For example:
  - What is the range of options for deal structure (up to and including full merger/integration)?
  - What are the pros and cons of each option?
  - How can equity be divided and the funds flow be structured to ensure that each partner has equal exposure to the deal's risks and rewards?
- What contingency planning, including potential go/no-go triggers and partner performance requirements, should be incorporated into the deal's terms?
- What will the schedule of meetings and decision points be to ensure each party's interests are fairly represented?
- Who will represent the partners during negotiations? Will these representatives remain consistent throughout the process?

Carefully structure governance of any new entity

- How will governance be shared between the two entities?
  - How many members from each partner's organization will provide representation on the new entity's or collaboration's governing body?
  - What type of majority (e.g., simple majority or supermajority) will be required for different kinds of decisions—including the decision to walk away from the partnership?
- Will the partnership and any resulting changes in governance affect the ancillary relationships either partner currently has with other health systems?

Children's hospitals that have already gained clinical scale in their local markets can consider whether it makes sense to partner superregionally with out-of-market children's hospitals, adult health systems that have a large pediatric care presence in adjacent markets, or other nontraditional partners. Increased collaboration with children's hospitals in other markets or regions might be especially attractive because it would maintain the primacy of pediatrics as a specialty in a way that partnering with organizations that view children's healthcare as only a component of their missions cannot.

Once a children's hospital has winnowed its possibilities down to a short list, it must prioritize its potential partners based on a range of quantitative and qualitative factors. For example, the hospital should determine which of the partnerships would achieve the greatest impact through consolidation of clinical programs, given the other pediatric and adult health systems in its market. It is also crucial that it assess its broader structural alignment and cultural fit with each potential partner, since they are the key drivers of a partnership's ultimate success.

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Several trends make it necessary that children's hospitals develop a more efficient level of scale to achieve their missions. These hospitals should evaluate what their needs are and determine whether enhanced structural partnerships could help them fulfill their strategic aspirations.

If a preferred partner is identified, a number of steps can be taken to ensure that the partnership is developed in a thoughtful way. To accomplish this, a children's hospital should ask itself the questions listed in the sidebar on page 8. The answers to these questions should then be compared against a go-it-alone scenario to ensure that the right decisions are made.

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