
MEMO TO: Citizens Advisory Committee
Children's Hospital Major Institutional Master Plan

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SUBJECT: Proposed Total Area for 600 Bed Pediatric Medical Center

There have been a number of questions regarding the proposed floor area of 2.4 million square feet. This memo will describe how the floor area was projected; benchmarks with peer institutions and explanation of what drivers there are for space in an academic pediatric medical center.

How was the 2.4 million square feet calculated?

The need for space is a reflection of the care that Children's Hospital endeavors to provide for children in the state of Washington and across the region. Children's has a strong reputation and is nationally recognized for programs that provide care to children in a wide variety of areas. The first step in assessing the future need is to understand the care that Children's currently provides. This was completed through thoughtful review of the historical patient volumes and services. Over the past two years, Children's Hospital had also completed a Strategic Plan that outlined areas for further development. Children's plan emphasized five strategic growth areas - cardiovascular, hematology/oncology, neonatology, craniofacial services and transplantation - as the major areas that will advance the services provided to children in the future. This plan serves as the backbone for the development of the future spaces that will be needed to support these care goals. Both the historical patient care volumes and these strategic development areas provided the basis for understanding the future space needs at Children's. This "hard data" was augmented and enhanced through discussions with service leaders (medical and administrative) about the needs for children in the area and expected programmatic growth. The Puget Sound region population trends were also reviewed along with regional/national trends in pediatric care to understand the underlying demographics and patient needs. Once an assessment of the overall future care need was completed, the decentralization efforts were considered, including the planned construction of Children's ambulatory centers in the metropolitan area. This process resulted in an understanding of the potential future number of children that will require care at the Laurelhurst campus. These projected future patient volumes drive the number of treatment rooms (i.e. operating rooms, MRI's and inpatient beds). The number of these "major rooms" determines other patient areas (operating rooms require patient prep and recovery spaces, etc.), and support areas (operating rooms also require storage, equipment sterilizing, staff lockers, etc.). Using industry standards for academic pediatric medical center space needs, areas for each service at Children's Hospital were calculated and combined into a total space need with a sum of 2.4 million square feet.

Master plan phasing allows for Children's to incrementally respond to actual community need over the life of the master plan.

The participants working with Children's Hospital in this effort were Kurt Salmon Associates (KSA), and Zimmer Gunsul Frasca Architects LLP (ZGF). KSA is the leading national health care planning firm with work at many of the top pediatric hospitals in the United States. ZGF has extensive national healthcare design experience including academic pediatric medical centers.

How does Children’s Hospital proposed area compare to peer institutions?

Children’s Hospital is ranked in the top ten in a number of published sources including number 9 on the *U.S. News & World Report Best Hospitals 2007 Pediatric Specialty*. Children’s Hospital aspires to continue to be top ranked. A benchmarking chart illustrates how Children’s compares in size to the other top ten children’s hospitals. All ten institutions are also academic or teaching hospitals.

Program components benchmarked are comparable to the proposed Children’s Hospital MIMP. “Comparables” would include freestanding academic pediatric medical centers, not combined adult/pediatric medical centers and not including research labs which Children’s Hospital is not including on its hospital campus.

Benchmarking Comparison:						
U.S. News & World Report Best Hospitals 2007 Pediatric Specialty						
<i>Rank</i>	<i>Name</i>	<i>Beds</i>	<i>Square Feet SF/Bed</i>	<i>Year of Last Major Project</i>	<i>Replacement or Expansion</i>	<i>Comments</i>
1	Children's Hospital of Philadelphia	514	5,062	2008	Expansion	Hospital alone is 3,717 sf/bed
4	Children's Hospital, Denver	270	5,333	2007	Replacement	Central Plan excluded (200 +/- sf/bed)
6	Texas Children's Hospital, Houston	485	4,700	2001	Expansion	Hospital alone is 3,700 sf/bed
7	Cincinnati Children's Hospital	523	4,700	2002	Expansion	Bed count is after current renovation. Total main campus is 5,666 sf/bed
9	Children's Hospital, Seattle; existing	250	3,600	2006	Expansion	
9	Children's Hospital, Seattle; proposed	600	4,000	n.a.	Expansion	
Missing ranked hospitals are pediatric hospitals that share extensive services with adult hospitals so comparison is not possible.						

Information was gathered through a number of sources including facility directors at the institutions. KSA and ZGF, having worked at a number of these institutions, also contributed.

What drives the need for space in a modern academic pediatric medical center?

The illnesses being treated at academic pediatric medical centers tend to be more critical and often involve multi-system specialists. These patients have multiple requirements. These needs require more staff, more types of specialists, more technology, more equipment and space to store equipment that often varies with patient sizes. The specialists will be found in patient rooms, in clinic exam rooms, in offices and other settings on campus so that they can respond to the quick changing conditions of young patients. When a child is more seriously ill, there will also be more visitors who need to be housed close to the child – often in the patient room or lobbies. Teaching functions also bring more students and residents to the patient care area. All of these factors lead to more people and more equipment, all of which drives more space in every room compared to hospitals of the past.

Behind the scenes at a hospital are many functions visitors do not see. Laboratories, equipment sterilizing, educational spaces, emergency supply storage, and food preparation are all included in the space need. The attached pie chart depicts composition of the functional areas.

Some specific examples of how rooms have grown include:

<i>Room</i>	<i>1970 Standard</i>	<i>Modern Standard</i>	<i>Comments</i>
Operating Room	400 sf	720 sf +/-	More equipment and staff
Diagnostic Imaging	270 sf	1,000 sf	X-Ray vs. MRI Suite
Ambulatory Exam	80 sf	115 sf	More equipment and staff
Toilet	25 sf	42 sf	ADA

Summary

In summary, future space needs were projected on a service by service basis over the next 20 years. These space requirements reflect the true need for Children's future based on the following:

- The changing demographics of Children's service area
- The increasing acuity of its patients
- The technology, equipment, and staff required to care for critically ill children
- The need for care givers to be located close at hand to respond to any emergency
- The healing comfort of allowing families and loved ones to be housed near a sick patient

Since long term projections can vary, the growth can occur incrementally to meet the need. Children's is well within the square feet per bed range of peer institutions and is in fact at the lower end of that range due to Children's initiative to decentralize services off the Laurelhurst campus and its on-going efforts to maximize efficiency in care delivery.