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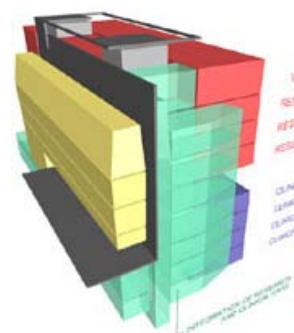
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Centers of Excellence: Research-Based Design for Discovery and Cure

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The combination of clinical care, research, and education in Centers of Excellence creates an optimal environment that benefits clinicians, researchers, staff members, patients, and their families. The design concept enhances the interaction between researchers and clinicians, which in turn increases opportunities for more direct application of research findings to actual treatment and cures in the delivery of patient care. This design concept also has significantly increased fundraising opportunities for medical centers and their affiliated medical schools across the country. By incorporating this concept into major teaching hospitals, it is possible to develop a tranquil and healing environment through building and landscape design—improving the patients' understanding of the research and healing process while providing a renewed sense of hope to patients, families, and the community.



Stacking Diagram - Centers of Excellence

Developing the Concept into Real Design

The Child Health Institute of New Jersey is among the facilities being built nationally to promote collaboration between experts in research and clinical care. By putting technologically advanced research laboratories and patient care facilities in the same building, medical schools, philanthropists, and governments hope to accelerate medical discoveries and create a shared vision between physicians and researchers.

The Child Health Institute is a \$72 million biomedical research and clinical care pediatric facility that will benefit children throughout the Northeast. The Institute is an independent research foundation, developed in conjunction with the Robert Wood Johnson Medical School of the University of Medicine and Dentistry of New Jersey. The new 150,000-square-foot, six-story building will anchor the medical campus of Robert Wood Johnson University Hospital, providing patient and staff access to the recently completed Bristol-Myers Squibb Children's Hospital at Robert Wood Johnson University Hospital.

This complex, multidisciplinary building is designed to create a gateway into the medical campus and provide an opportunity for researchers, clinicians, children, and their family members to meet one another and share their work, aspirations, and hope. The building houses facilities for research, healthcare, conferences, exhibitions, and dining. Visitors are invited to enter the facilities from multiple directions on multiple levels. A two-level lobby links the main entrance to the upper level colonnade and courtyard while providing space in the atrium for exhibits of researchers' discoveries in the fields of childhood development and the prevention and cure of childhood diseases. As patients and their families learn more about the in-house research activities, their hope will grow.

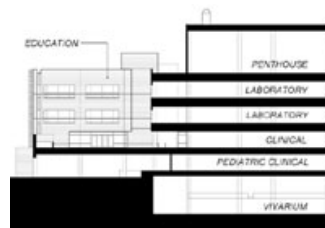


Child Health Institute of New Jersey

The Robert Wood Johnson Medical School's Child Health Institute includes an ambulatory care center for pediatric subspecialties, faculty offices for the pediatricians, and a pediatric clinical research center. Each clinic suite is designed to accommodate tertiary pediatric care, with larger exam rooms and private preceptor areas in each exam cluster that support patient privacy and medical education. Faculty offices are separated yet adjacent to their respective outpatient clinic suites for improved efficiency of professional staff.

Clinical Floor Plan - Child Health Institute

The project also includes three floors of research labs and a transgenic vivarium, along with support, administration, and conference space. The research floors are arranged to maximize the use of space while enhancing the natural circulation of researchers.



Section Diagram - Child Health Institute

From Dreams to Reality

The Cancer Institute of New Jersey (CINJ) is another successful Center of Excellence, with a program, layout, and design similar to that of the Child Health Institute and others around the nation. The mission of CINJ is to seek methods to prevent, detect, and cure cancer; to educate professionals in the field of cancer care and prevention; and to comprehensively treat cancer patients and their families. The Institute has successfully integrated cancer research and outpatient clinical care into a facility that, in less than five years, has been designated as a National Cancer Institute and has more than doubled its volume in clinical care and research grants.

The original 68,000-square-foot CINJ represents the collaboration of seven University of Medicine and Dentistry of New Jersey Affiliated Hospitals. The Institute, designed to accommodate 16,000 patients annually, treated 35,000 patients in 1999 as a result of its state-of-the-art treatment programs and its success in turning lab research into clinical applications.

The challenge for the Cancer Institute project team was to provide a seamless addition that reinforces both the clinical and research aspects of the facility while creating a sensitive and healing environment for the patient and family. The team accomplished through several design approaches:

Layering the spaces from public to private—from the community resource center to the patient spaces to the research laboratory—fosters researchers' collaboration on new protocols and enables patients to see active research taking place, providing them with a heightened sense of hope for their own treatment and for future cures.

Flexible interactive space shared by researchers, clinicians, patients, and the community enhances efficient communication within and between groups.

The tranquil and healing environment through building design contributes both to the healing process and to patients' understanding of the research of healing.



Clinical Floor Plan - Child Health Institute



Research Floor Plan - Cancer Institute of New Jersey

The 120,000-square-foot new addition, currently under construction, continues a concept that has worked extremely well in the original facility-making a visual and physical connection between clinical care and research. For example, a multistory atrium connects the laboratory spaces with the clinical spaces below. Patients and family members confirmed in focus groups that their hopes, and spirits, are raised by the sight of research laboratories surrounding the open atriums. The design concept also fosters a significant increase in communication and collaboration among caregivers, clinical researchers, and basic science researchers by providing formal and informal gathering areas throughout the facility-including conference rooms, sitting areas open to circulation, and multiple coffee/lunch areas.

One of the most important design concepts was to ensure that the addition accomplished a sense of "bigger but smaller" from the patient/family perspective. This was accomplished by creating treatment and exam suite clusters and sub-waiting areas that will increase privacy as well as comfort levels. Prefect rooms conveniently located throughout the exam suites provide private areas for caregiver discussions with students, residents, and researchers without compromising patient confidentiality. All waiting areas feature views to an outdoor healing garden-a peaceful buffer between the patients and the public that also directs patients' visions outward toward their future.



Floor Plan - Cancer Institute of New Jersey

The Future of Healthcare Delivery
Centers of Excellence focus on medical research, outcomes, prevention, detection, treatment, and patient care through the interaction of physicians, scientists, caregivers, and patients. At such centers, patients and family members can better understand the implications of basic research-previously "hidden" from patient care areas-and this understanding provides increased opportunities for fundraising from patients and families.

This growing trend has become a nationally recognized concept as the National Cancer Institute, part of the National Institutes of Health, has earmarked \$360 million in funding for multidisciplinary cancer centers in its 2004 budget. This reinforces the recognition and reality of the development of Centers of Excellence around the nation.



Construction Photo - Cancer Institute of New Jersey

For both the New Jersey Medical School's new University Hospital Cancer Center and the University of South Alabama's new Cancer Research Institute, the same design concept is being integrated into the new buildings, modeled after the example of success set by other facilities. The future of healthcare and the treatment of debilitating disease is in the hands of researchers and clinicians alike-with hope for eventual cures through increased communication and collaboration. Centers of Excellence offer

patients and their families hope-through the knowledge that leading scientists are working on cutting-edge research that may benefit them or their loved ones in the future.

The Academy Journal is published by the AIA Academy of Architecture for Health (AAH). The Journal is the official publication of the AAH and explores subjects of interest to AIA-AAH members and to others involved in the fields of healthcare architecture, planning, design and construction. www.aia.org/aah

This article originally appeared in *The Academy Journal*, published by the AIA Academy of Architecture for Healthcare (Volume 6 – October 2003).