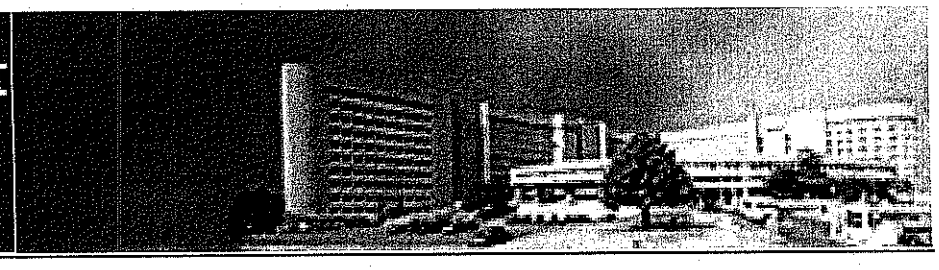
University of Connecticut
Health Center
KNOW BETTER CARE



THE UCONN HEALTH NETWORK
&
CT BIOSCIENCE INITIATIVE

Higher Education and Employment Advancement Committee
& Public Health Committee

Joint Informational Forum

Presented by: Mike Hogan, PhD, President, University of Connecticut
Cato Laurencin, MD, PhD, VP for Health Affairs, Dean, School of Medicine, UCHC

March 11, 2010

University of Connecticut Health Center

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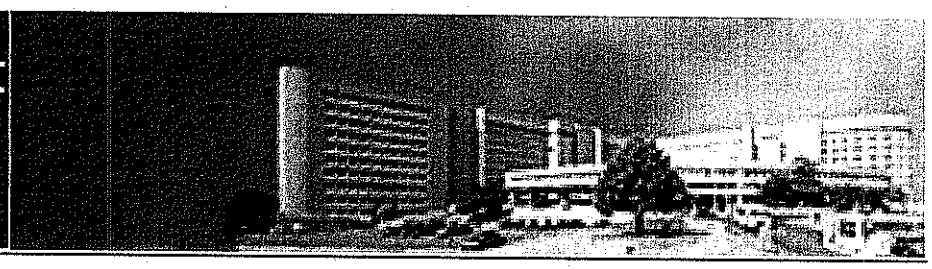

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University of Connecticut Health Center

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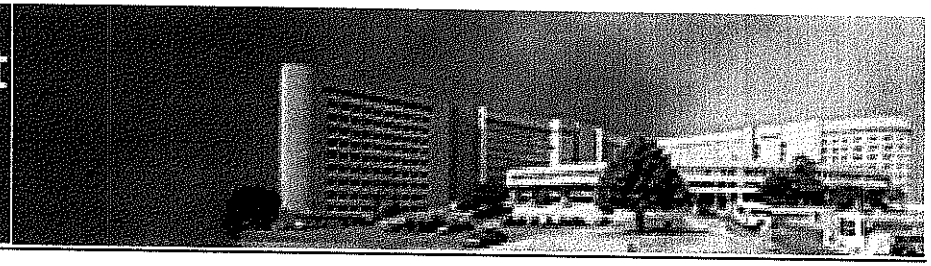
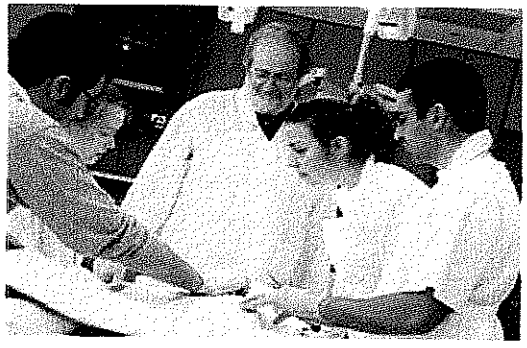
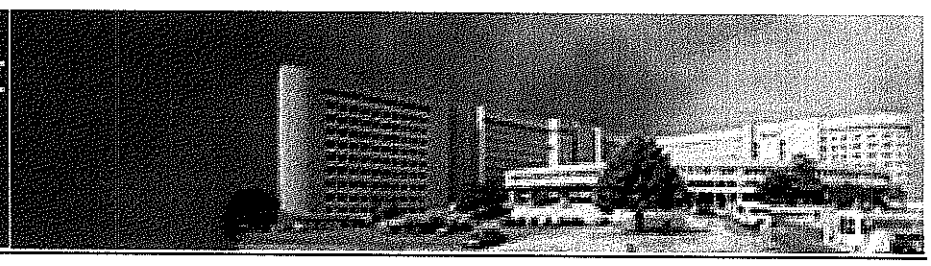


Higher Education and Employment Advancement Committee & Public Health Committee



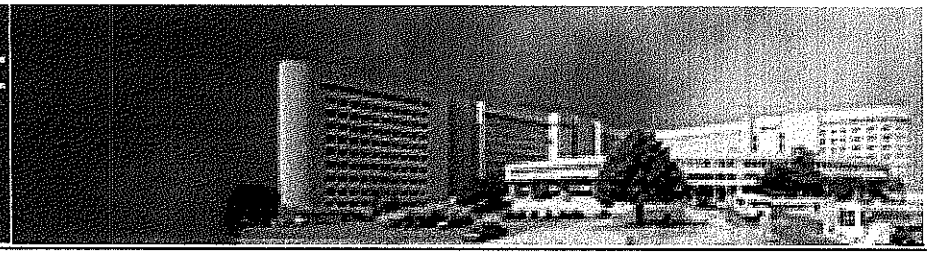
JOINT INFORMATIONAL FORUM

March 11, 2010



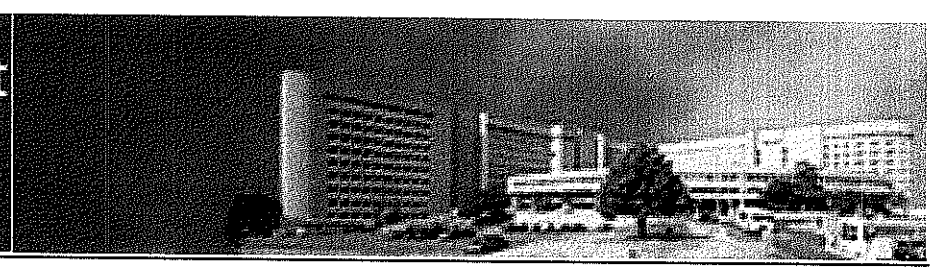
UCHC'S Mission: Education, Research and Patient Care

- ***3 Schools:***
  - Medical School (346 students)
  - Dental School (170 students)
  - Graduate School in bio-medical sciences (344 students)
- ***Residency Training***: 679 residents (medical and dental) who train in local hospitals
- ***Research:*** More than **$90M** generated annually to support discoveries translated into patient care e.g. Stem Cell research, cancer vaccines, hormone therapies for Osteoporosis, new materials for Dental Implants
- ***Patient Care***
  - ***John Dempsey Hospital (JDH)*** a 224 bed acute care university teaching hospital
  - ***UConn Medical Group (UMG),*** the multi-specialty faculty practice
  - ***Serve as Sites for Learning*** and represent key elements in attracting talented faculty who want to teach, do research and provide patient care
- ***UCHC*** **represents ½ of the University of Connecticut, ½ of its budget, ½ of its employees and ½ of its research portfolio.**



A Worthy Investment

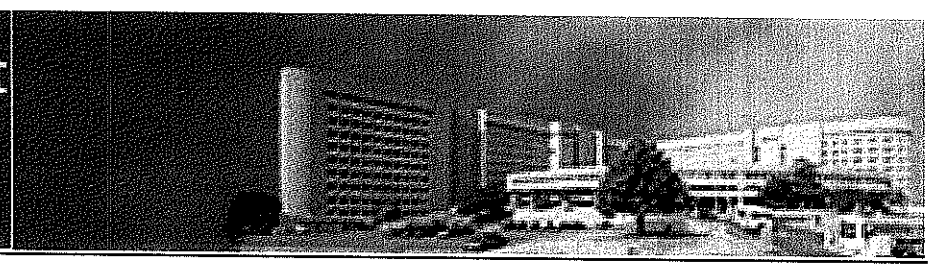
- *5010* employees (78% unionized staff, 10% unionized faculty, 2% non-union faculty, 3% managerial and 7% residents/graduate assistants/student payroll)
- Generates nearly *$1 billion* in Gross State Product
- Critical source of health care professionals
  - 35% of School of Medicine graduates practice in the State
  - 46% of School of Dental Medicine graduates practice in the State
  - 58% of the State dental workforce are School of Dental Medicine graduates
- Connecticut residents comprise 80% of the School of Medicine students and 68% of the School of Dental Medicine students
- Minority enrollment above National average
- Dental School is historically ranked #1 or #2 in the country
- School of Medicine national leader in innovative curriculum



UCHC: Partner & Resource to Other Hospitals

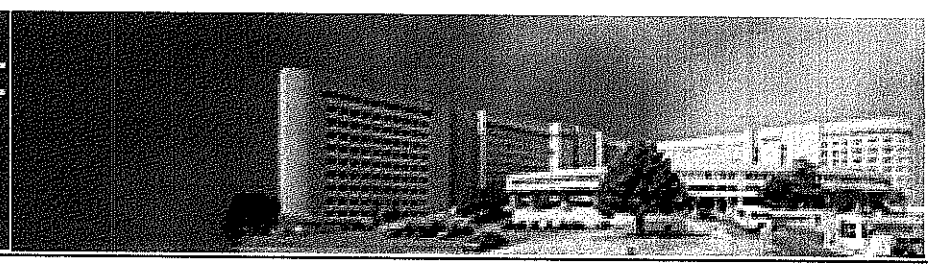
Internship/Residency Programs contribute to the quality of service in the participating hospitals & also drive additional Medicare reimbursement to their bottom line:

Hospitals FY 08	GME & IME Reimbursement
CT Children's Medical Center	$3.2M
Hartford Hospital	$36.9M
Hospital of Central Connecticut	$7.4M
John Dempsey Hospital	$19.7M
St. Francis Hospital	$26.8M
TOTAL	**$94.0M**



UCHC: Partner & Resource to Other Hospitals

- Train physicians and staff of Waterbury and St. Mary's for regional cardiac surgery and interventional cardiology program
- Train staff and assisted ECHN in establishing a Level II nursery at Manchester Hospital
- Provide regional dental emergency room service
- Provide Pediatric dentistry program at CCMC
- Provide Statewide Neonatal Transport Program and Regional Neonatal Intensive Care Unit / In FY09, UConn's Neonatal Transport Program transported 301 neonates to JDH and 13 other hospitals from 80 Connecticut towns
- Provide workforce at St Francis/UConn Burgdorf Clinic (Hartford's north end)
- Training site for nursing, allied health schools, pharmacy



UCHC: A Resource to the Community and the State

- **Service to Medicaid Patients**
  - → JDH is one of the top 4 hospitals in CT in providing inpatient care to Medicaid patients
  - → Largest provider of dental services to Medicaid recipients and the under- and uninsured
    - 67% of patient visits to the UCHC dental clinic are Medicaid clients
  - → In 2009, 12.2 % of UMG visits were Medicaid patients

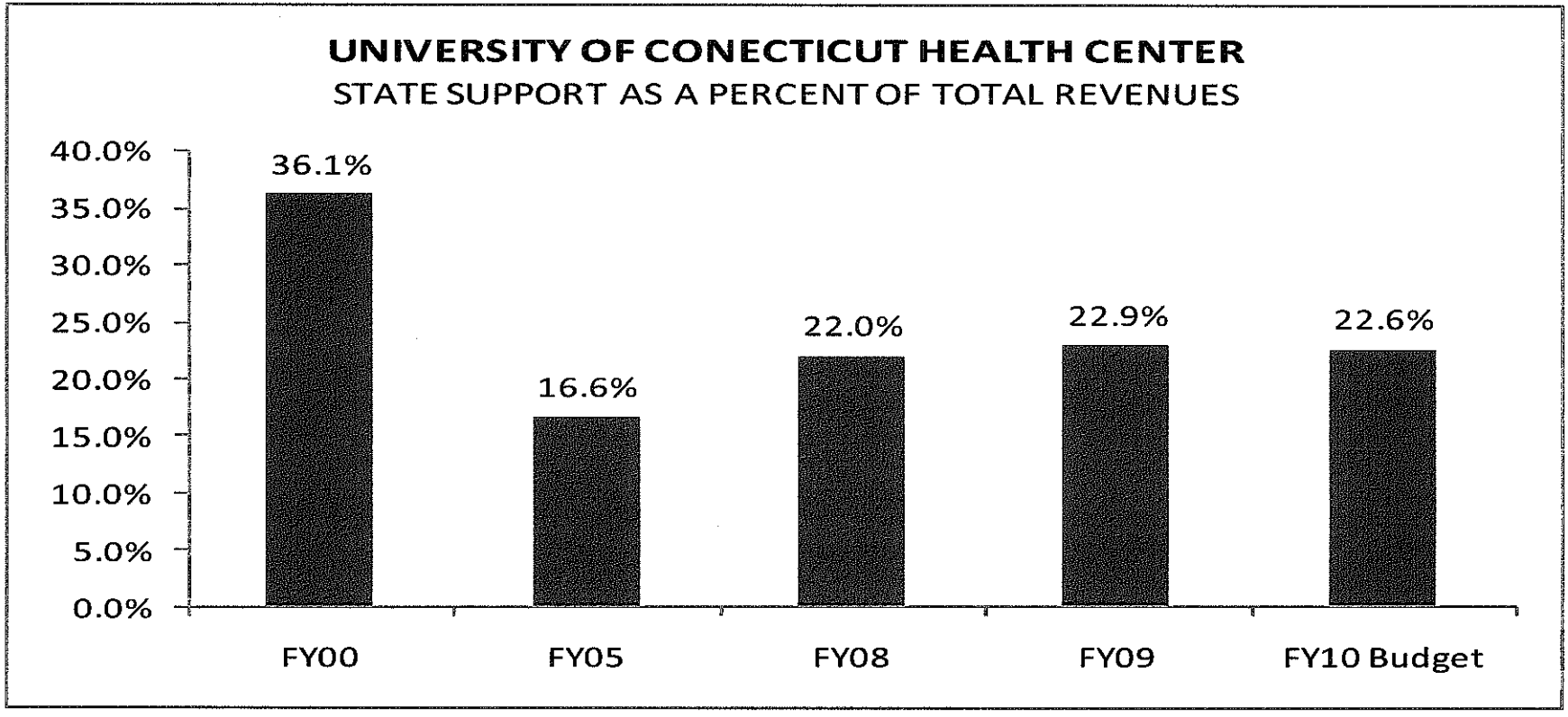
- **Clinical Service Collaboration:**
  - → Departments of Public Health, Corrections, Mental Health & Addiction Services, Veteran Affairs, and Developmental Services

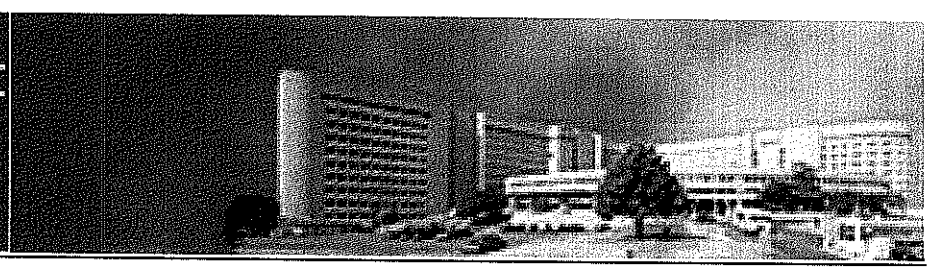
- **Community Service:**
  - → South Park Inn Medical Clinic (Hartford)
  - → South Marshall Street Homeless Clinic (Hartford)
  - → AETNA Health Professions Partnership Initiative
  - → Urban Service Track
  - → Connecticut Poison Control Center
  - → YMCA Adolescent Girls Medical Clinic (Hartford)
  - → Camp Courant Dental Screening Program
  - → Migrant Worker Clinic
  - → Covenant House (Willimantic)

- **Economic Driver for the Region and State**
  - → Catalyst for biomedical and biotech jobs, e.g., Stem Cells
  - → Robust clinical enterprise

State Support

- **22.6% of the Health Center budget is state supported.**
- **77.4% comes from other revenues (clinical, research, tuition, philanthropy).**





About John Dempsey Hospital (JDH)

- Opened in 1975, JDH is the only public university acute care hospital in Connecticut and the 2nd smallest academic health center hospital in the U.S.

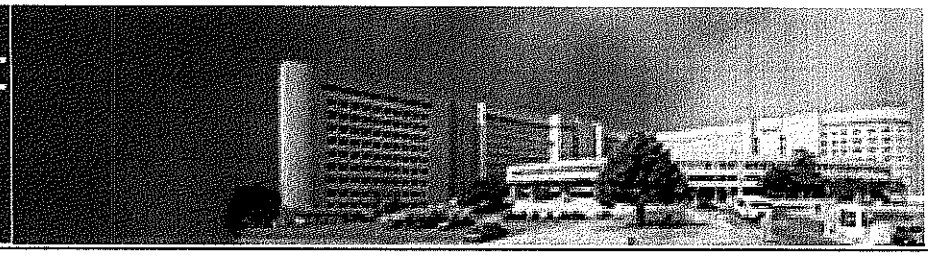
- Key service statistics
  - 9,761 inpatient admissions
  - 843,854 outpatient services
  - 93,003 dental clinic visits

- Originally planned at 400 beds, JDH was built at 200 beds. The second tower was never built.

- 224 fully staffed and licensed beds, of which 105 are very specialized (Neonatal, Prison, Psychiatry, Maternity), leaving only 119 medical/surgical (flexible) beds

- 22.8% of JDH inpatient days are Medicaid recipients. JDH is in the top four hospitals in Connecticut for Medicaid inpatient days as a percentage of total inpatient days. JDH is a disproportionate share hospital for Medicaid and Medicare.

- Faces the same set of challenges as the state's other 29 acute care hospitals: Medicaid/Medicare cutbacks, uncompensated care, low reimbursement rates, nursing and other health care profession shortages and the realities of an intensely competitive marketplace.



UCHC's Structural Financial Challenges

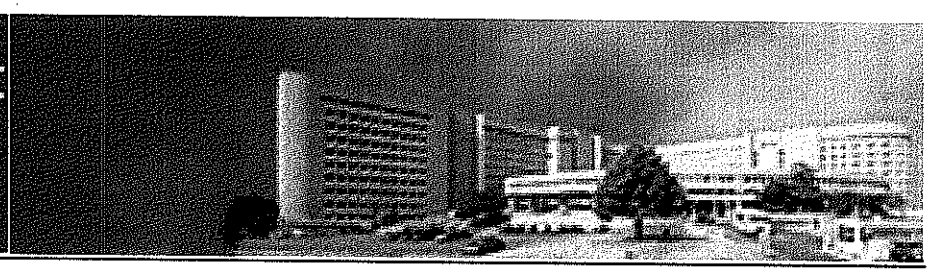
- Structural financial deficits facing UCHC have been described to the General Assembly over the past three years

- The FY 2010-2011 biennial budget temporarily addresses these structural deficits through an increase in our block grant and fully funding the JDH fringe benefit differential. We are grateful for the General Assembly's recognition and support.

- Since 2000, the Health Center has achieved over $100M in improvement

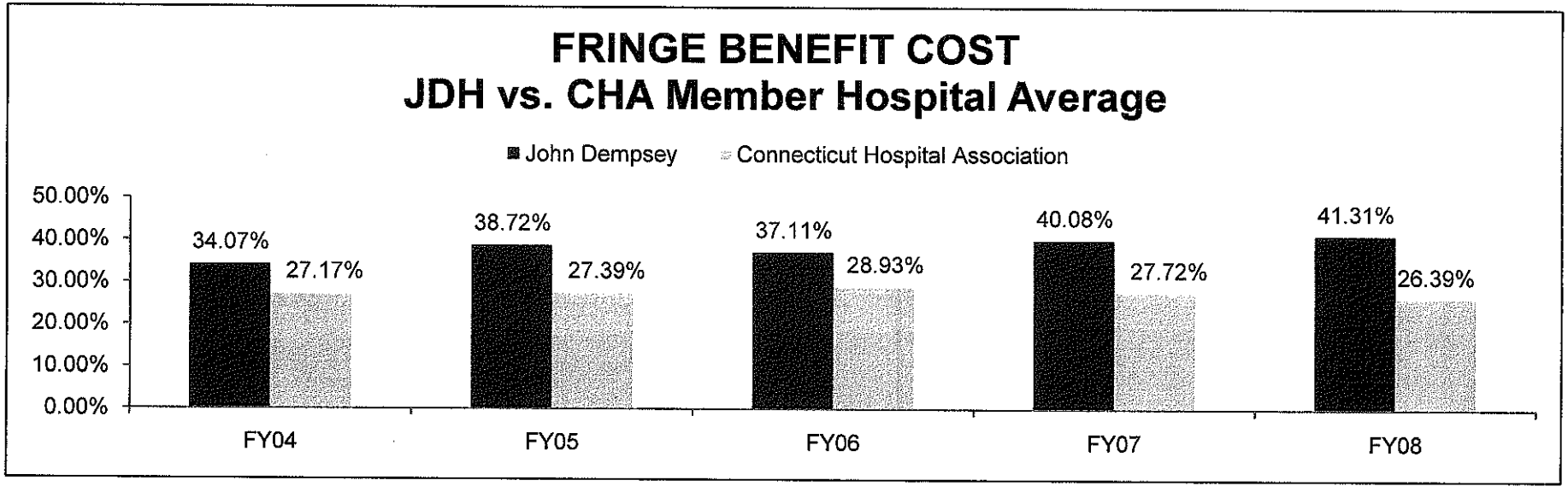
- The most recent Health Center initiatives implemented in FY 2009 and 2010 resulted in cost reduction and revenue enhancements of over $14M

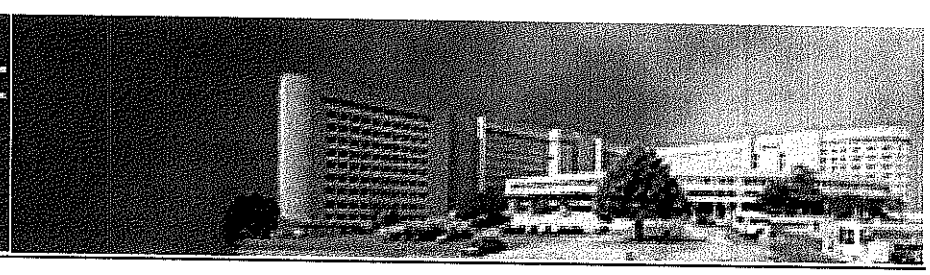
- Despite the above, we must not lose sight of the long term structural problem as verified in the March 2008 CASE & Price Waterhouse Cooper reports. A long term solution needs adoption and implementation.



Fringe Benefit Cost
JDH v. CHA Member Hospital Average

- As a state entity, JDH has fringe rates significantly higher than other hospitals.
- JDH has historically absorbed the cost of fringe benefits for its employees.
- In FY09, $3.6M in the state comptroller's fringe account was allocated to help offset some of that cost. In FY10 and FY11 that number was raised to $13.5M.
- The dollar value of that differential was $10.7M in FY 07, $14.4 in FY08 and is estimated at $14M in FY09, $14M in FY10 and FY11.





JDH Physical Plant Status

- 35-year-old facility with no major upgrades since it opened
- Undersized and becoming increasingly outdated
  - Patient care areas need updating for next generation standards of care, technologies, privacy concerns, and patient/ provider expectations
  - Today's standard of care calls for single-bedded rooms
  - In its current configuration, JDH is comprised of primarily double-bedded rooms and is not up to standards.
  - In addition, present design precludes efficient staffing ratios or cost-effective renovation

Core Goals

UCHC Financial Stability	Connecticut's Physician Workforce
• Growth in Capacity • New Facilities • Clinical Program Mix	• Retain Students in UConn Residencies • Produce More Primary Care Physicians • Increase Class Size Over Time

A larger John Dempsey Hospital is needed to accomplish both

The UConn Health Network
&
CT Bioscience Initiative

Governor M. Jodi Rell

Who is in this Network?

- Stakeholders:
  - University of Connecticut
  - State of Connecticut
  - Connecticut Children's Medical Center
  - Hartford Hospital
  - St. Francis Hospital
  - Hospital of Central Connecticut
  - Bristol Hospital
  - Federal Government
  - Biomedical Industry
  - Venture Capital Firms
  - And others
- For years, our area hospitals, as well as the public and private sector, have worked as partners in a variety of ways. To capitalize upon and enhance that cooperation, we propose a network and partnership that will:
  - Create generations of new jobs
  - Improve access to quality health care
  - Move the UConn School of Medicine to the national top-tier in academics and research

New JDH Hospital Tower and a Remodeled Health Center Enhancing Academic and Research Capabilities

- A new and larger John Dempsey Hospital Tower is a key element in providing high quality patient care, creating a vibrant academic setting and the associated creation of jobs in the public and private sector:
  - 230-234 beds
  - Will allow for larger class sizes in the Schools of Medicine and Dental Medicine, providing more doctors and dentists for the State.
  - More than 5,000 new jobs in the new UConn Health Network, not including associated jobs in the private sector.
- The new UConn Health Network will provide more economic development opportunities and jobs in the biomedical sector for the greater Hartford region and the entire state.

Neonatal Intensive Care Unit

- The John Dempsey Hospital Neonatal Intensive Care Unit operations transferred to Connecticut Children's Medical Center (CCMC):
  - Patients continue to be located at JDH
  - Operated by CCMC as a component of the CCMC-sponsored Regional Children's System
- Other partners include:
  - Hartford Hospital (currently participates)
  - Waterbury and St. Mary's Hospitals (currently participate)
  - St. Francis (negotiations in process with CCMC)

Comprehensive Cancer Center

- Goal: Achieve National Institutes of Health designation as a Comprehensive Cancer Center
- Advances state-of-the-art cancer-related research, education and patient care
- Generates significant opportunities for larger federal and other public- and private-sponsored research funding
- Participants (clinical trials and patient care at multiple sites):
  - UCHC
  - CCMC
  - Hartford Hospital
  - Hospital of Central Connecticut
  - St. Francis
  - Other hospitals, community cancer centers, medical groups and pharmaceutical companies

Regional Simulation and Conference Center

- Goal: A nationally recognized site for education of health care professionals, utilizing the newest technologies of simulated care settings
- Mock patient, OR, ICU, OB and trauma rooms, as well as high-technology mannequins used for education of health professional students, as well as experienced practitioners learning new techniques (e.g., robotic surgery)
- Located on the Hartford Hospital campus and part of the UConn Health Network
- The Regional Simulation and Conference Center would be made available to other hospitals, nursing schools, EMT training programs, etc.
- Will train 1,500 to 2,000 medical practitioners each year.

Regional Primary Care Institute

- Goal: A nationally recognized site for development of new models of chronic disease management and primary care delivery and education
- Addresses the impending shortage of primary care providers in Connecticut
- Increased potential for attracting public and private grant funding
- Located on the St. Francis campus and part of the UConn Health Network
- The Regional Primary Care Institute would be made available to other hospitals, pharamceutical firms, medical practices and public health agencies

Health Disparities Institute

- Goal: Enhance research and care delivery for the medically underserved statewide
- Will conduct applied research on health disparities in minority communities
- Will provide training opportunities for minority scientists in clinical research
- Potential for partnership with the Cobb Institute – the largest professional association of African-American physicians, with 35,000 members

Institute for Clinical and Translational Science

- Goal: National Institutes of Health Clinical and Translational Science Award Grant (application pending)
- Clinical trials "super-site" is envisioned among partnering organizations
- Multi-million dollar potential research grant funding -- 18 new jobs created for each $1-million in grant funding (source: NIH)
- UCHC, CCMC, Hartford Hospital and St. Francis are all sponsors of the grant application, which was developed as a team.
- Offices to be located at UCHC; clinical trials conducted at multiple sites.

Bioscience Enterprise Zone

- Goal: Creation of thousands of new private-sector jobs in industries supporting or associated with the UConn Health Network
  - Financing and loan guarantees through the Connecticut Development Authority, Connecticut Innovations and the Department of Economic and Community Development
  - Tax credits for facility improvements or expansion
  - Exemption from state real estate conveyance tax

What does it cost and what do we get?

- A new patient tower and renovated academic and research facility at JDH. Cost: $352 million
  - $236 million for new patient tower
  - $96 million for renovated academic and research facility
  - $20 million for the Comprehensive Cancer Center, Regional Primary Care Institute, Health Disparities Institute, Simulation Center and Institute for Clinical and Translational Sciences
- Funding Sources:
  - $25 million from UCONN 21st Century
  - $100 million from federal funds
  - $227 million from State bonding

**Investment contingent upon federal funding*

***$25 million in UCONN 21st Century monies would be used for design cost.*

Supplemental Material

Facility Plan

	Current	Governor's Plan
Med/Surg Beds	119	165-169
Increase in Med/Surg Beds	**0**	**46-50**
Maternity	20	20
Newborn	10	10
Psychiatry	25	25
Corrections	10	10
JDH Operated	**224**	**230-234**
NICU Operated by CCMC	40 (JDH Operated)	40
Total Campus Beds	**224**	**270-274**

- New bed tower
- Renovation of existing space for:
  - Ancillary services: labs, pharmacy, radiology
  - Dental clinics
  - Emergency department
  - Cardiology
  - Psychiatry
- NICU remains on Farmington campus but is operated by Connecticut Children's Medical Center

Financial Model Outcomes

Proposed Capital Investment at JDH	$332M
2017 UCHC Projected Operating Margin	$3.9M

Class Size Increase

- Short term: Incremental increase in School of Medicine class size and School of Dental Medicine residencies
  - Increase first year medical school class by 5 students (20 students over 4 years)
  - Increase SODM residency programs by 10 first year positions when new dental clinics are available (20 residents over 2 program years)
- Longer term: Provides clinical facilities essential for additional future class size increases; we will plan for further increases as resources allow

UConn Health Network Initiatives

2010

Primary Care Institute

Analysis shows a growing shortage of primary care physicians in the nation and in Connecticut. To address this shortage, both the University of Connecticut and Saint Francis Hospital & Medical Center are committed to encouraging medical students to study primary care, attracting more residents to train in primary care, and to retaining practicing primary care physicians in the region. Establishing a Primary Care Institute, housed at Saint Francis Hospital & Medical Center, will facilitate these goals as a regional asset to promote healthcare in the Greater-Hartford area and beyond. In addition to addressing the shortage of primary care physicians, the Primary Care Institute will drive new funding for research on healthcare quality and effectiveness, and health information technology to the region. Such funding is available through the National Institutes of Health and the Agency for Healthcare Research & Quality. Over a five-year period, the Institute could generate $10M-$15M in new federal grants and contracts. This funding, in turn, would not only raise the visibility of the Institute, but also support between 36 and 54 new jobs annually for the region, many in the healthcare professions (e.g., doctors, nurses, therapists), sciences (e.g., research scientists, technicians), and support services (e.g., administrators, clerical workers).

Center of Excellence on Health Disparities Research

The racial gap in health and healthcare is a costly and growing problem in the nation and in Connecticut. Minorities have less access to quality healthcare, suffer from chronic diseases at much higher rates, and have substantially higher mortality rates. To address this problem of inequality in healthcare, UConn seeks to establish a national Center of Excellence in Health Disparities, with support from the Cobb Institute of the National Medical Association. The goals of the Center will include: (1) conducting applied research on health disparities in minority communities both in Connecticut and nationwide; (2) providing training opportunities for minority scientists in areas related to clinical research, health policy and analysis, and public health; (3) sharing best practices in the delivery of quality healthcare within minority communities. The Center will include a Hartford Office of the Cobb Institute/National Medical Association and will serve as a resource throughout the region and nation. It will have three unique divisions, each focused on a priority area: (1) applied public health, (2) health outcomes research, and (3) health disparities research. In addition to addressing the rising costs resulting from the racial gap in healthcare, the Center for Excellence on Health Disparities Research will drive funding from federal grants and contracts to the University of Connecticut, attracting new faculty devoted to research aimed at reducing health disparities. Within 5 years, the Center would be supported by over $4.5M in external grant funding, corresponding to over 80 new jobs for the region.

Simulation Center

The Simulation Center, housed at Hartford Hospital, will offer sophisticated training for the next generation of physicians and surgeons. Like flight simulators, medical education simulation centers use computer technologies to allow physicians to hone their skills in life-like clinical settings, without risks to patients. Available to physicians and healthcare providers throughout the region and beyond, the Center for Simulation will facilitate improved patient safety, quality of care, and improved healthcare outcomes by providing an ongoing facility for continuous education of doctors and other healthcare professionals. The Center will build on Hartford Hospital's national reputation in robotic and minimally invasive surgery and its $15M investment in a 40,000 square-foot facility housed in its School of Allied Health. The Center will attract new federal funding targeted to enhance medical education and will create new jobs for faculty, technologists, and administrators. It will also attract talented clinicians to the region. A resource for hospitals throughout the region and beyond, the Center will lead to improved and lower cost healthcare delivery. Enhancing the Simulation Center requires significant investment in technology and capital infrastructure and maintenance. Hartford Hospitals $15M commitment along with an annual $1M operating budget will cover these costs and also generate 7 new jobs for the region. More importantly, however, the Center will train 1,500 – 2,000 medical practitioners each year, who will reside and work in Connecticut.

National Comprehensive Cancer Center

By combining efforts of the UConn Health Center, Hartford Hospital, Saint Francis Hospital & Medical Center, the Hospital of Central Connecticut, and others, we will seek designation as a National Institutes of Health Comprehensive Cancer Center. This designation will put the UConn Network Regional Cancer Center on par with other nationally recognized cancer centers, which serve as a destination for excellence in cancer prevention, diagnosis, and treatment. It will also contribute to the UConn Network's efforts to attract federal and private sector funds for large-scale clinical trials, leading to improved treatments and innovations related to cancer care, screening, and prevention. This multi-hospital effort will combine several existing hospital-based centers to improve efficiency in both research on cancer and the delivery of treatment for cancer. Through its designation as a National Comprehensive Cancer Center, it will attract outstanding oncologists and cancer researchers to the region. In turn, this will attract more patients to the Greater-Hartford region, helping to reverse the current trend toward out-migration of patients seeking cancer care. On average, National Comprehensive Cancer Centers generate significant federal and private-sector funding. For example, a federal infrastructure grant alone can be expected to provide $28M in support over five years, translating to about 110 new jobs. The infrastructure support sets the stage for improving the Center's capacity for additional research grants and contracts, each million of which can be expected to result in 18 new jobs. This infrastructural support then sets the stage for further research grants. For example, established Center's generate about $49M in sponsored research funding, corresponding to hundreds of new jobs for the region.

Connecticut Institute for Clinical & Translational Science (CICATS)

The Connecticut Institute for Clinical & Translational Science is a unique team project initiated by UConn among the University of Connecticut, regional hospitals, state agencies, and community healthcare providers, with the goals of (1) increasing the volume of health-related research, especially clinical trials, (2) generating more federal and private-sector funding for Connecticut's biomedical researchers, (3) attracting new biomedical scientists to the region, and (4) creating substantial growth in Connecticut's biomedical economic sector through new discoveries that will become the basis for new businesses. The Institute focuses on building capacity for clinical trials – research that scientifically tests the effectiveness of new drugs and treatments on volunteer patients. Individually, hospitals throughout the greater-Hartford region are unable to launch large-scale clinical trials, because independently, they lack an adequate patient base for scientific testing. Together, however, they can combine their patient base, generating adequate capacity to attract major federal funding (for example, grants from the National Institutes of Health), as well as contracts from major pharmaceutical manufacturers and other biomedical firms. These funds and contracts are the basis for supporting new jobs in biomedical science, including jobs for research scientists, laboratory technicians, grant managers, and other support staff (e.g., research assistants, clerical staff). Every $1M in new grant funding for biomedical research generates, on average, 18 new jobs directly linked to the research involved in the grant. Working with a team of other regional hospitals, state agencies, and community healthcare providers, UConn recently submitted a team grant proposal to the National Institutes of Health to support work at the Connecticut Institute for Clinical & Translational Science for $20M – this single grant proposal alone corresponds to 360 new jobs, reflecting the enormous potential for job growth that the Institute can enable.

Biosciences Enterprise Zone

The UConn Health Network plan includes the establishment of a proposed "Biosciences Enterprise Zone". This initiative is intended to attract new commercial investment into the area, with a particular focus on the area around downtown Hartford. The biomedical research activity of the University of Connecticut is envisioned as a stimulus for the Biomedical Enterprise Zone, with technology transfer linkages being pursued to commercialize University based biomedical research. Connecticut has an existing enterprise zone strategy, enabled by PA 96 - 264. Benefits for businesses under this act include corporate business tax credits and property tax exemptions for investments made by the companies. The framework of the existing strategy could work to create a Biomedical Enterprise Zone in Hartford with some amendment to the statutory language of PA 96-264. Hartford has a designated zone north of downtown/I-84.

Regional Neonatal Intensive Care Unit Program

A robust maternal fetal medicine program, including a neonatal intensive care unit program, is a key element of a full suite of accessible and state-of-the-art clinical services for the citizens of Connecticut. Currently, however, different neonatal intensive care services are delivered by different regional hospitals. The lack of a comprehensive sole-source for these services arises, in part, because neonatal intensive care and pediatric medicine, in general, are highly specialized and expensive domains of healthcare. The resulting fragmentation is costly, inefficient, and

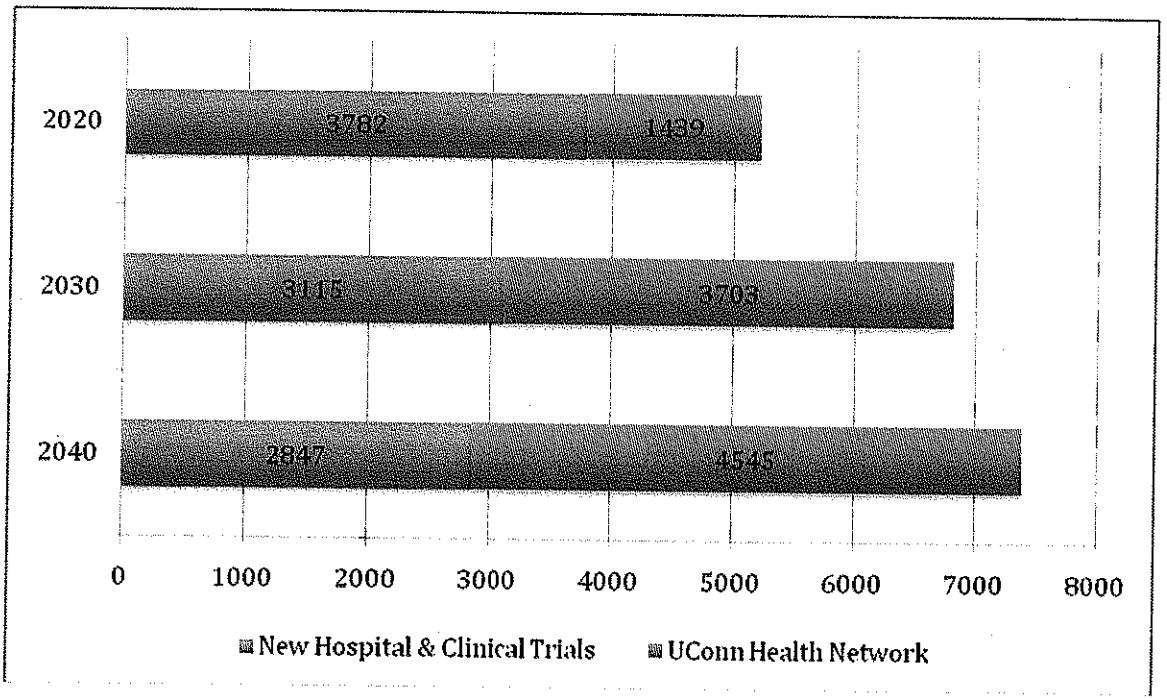
limits access for citizens. Indeed, evidence shows that obstetrics patients are seeking care outside the state, particularly in cases of high-risk pregnancy when they cannot be assured of full services. About 20 years ago, the greater-Hartford community made a well-reasoned commitment to bring together the pediatric services of area hospitals to create a single, regional children's care center: Connecticut Children's Medical Center. The result has been internationally recognized state-of-the-art pediatric care. Taking similar steps in the area of maternal fetal medicine and neonatal intensive care is a logical next step. Working with Connecticut Children's Medical Center, the UConn Health Center, Harford Hospital, Saint Francis Hospital, and hospitals in Waterbury will establish a regional neonatal intensive care unit program, operated by Connecticut Children's Medical Center. The efficiencies generated by this multi-institutional effort benefit the entire region. Not only will this statewide asset provide improved accessibility, efficiency, and continuity of care, it will also attract the highest quality pediatricians, obstetricians, and other clinical healthcare professionals to the greater Hartford area. Furthermore, it will drive more grant opportunities to the region and offer improved education and training to healthcare professionals working in these highly specialized areas.

Economic Impact Analysis

The Connecticut Center for Economic Analysis of the University of Connecticut analyzed the economic benefits that would flow from the expansion of the Schools of Medicine and Dental Medicine, a substantially new John Dempsey Hospital, and the development of the UConn Health Network. The payoffs to Connecticut's citizens in terms of jobs and income and to state government in terms of tax revenue and impressive returns on its investment from these pathways are striking.

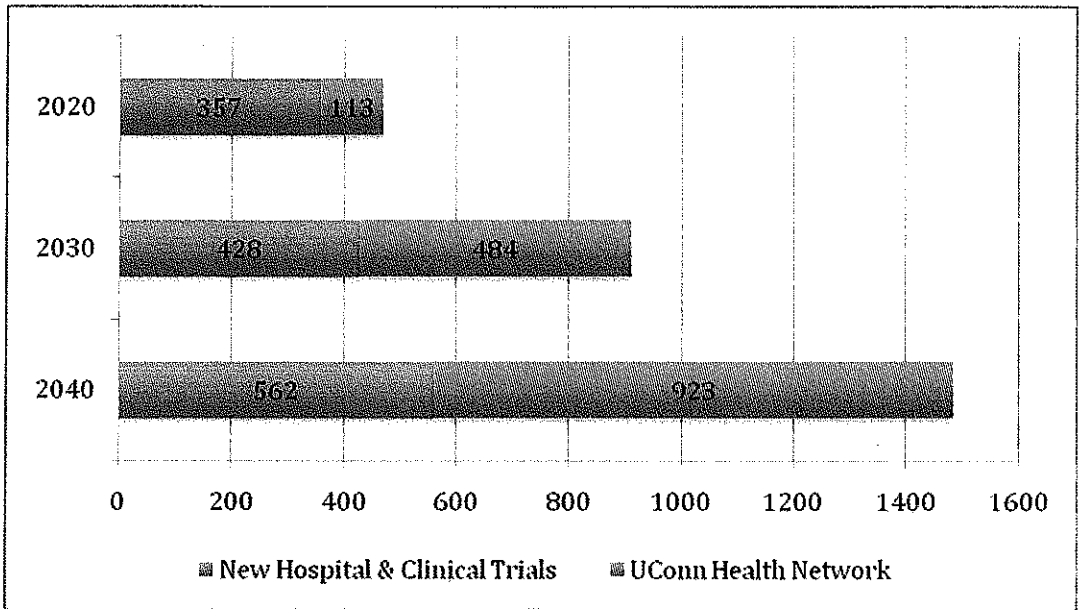
- **JOBS**: The new John Dempsey Hospital, together with the UConn Health Network and the increased capacity for clinical trials research will generate 5,221 new jobs by 2020. By 2030, approximately 6,818 new jobs wil be generated. These results are shown in Chart 1, below.

CHART 1: JOB GROWTH BY DECADE RESULTING FROM NEW JOHN DEMPSEY HOSPITAL & UCONN HEALTH NETWORK



- **INCOME**: The new John Dempsey Hospital, together with the UConn Health Network and the increased capacity for clinical trials research will generate $1,485 million annually in new personal income in 2040 (nominal dollars). This result is illustrated in Chart 2.

CHART 2: GROWTH IN PERSONAL INCOME (MILLIONS NOMINAL $)



- **STATE OUTPUT**: The new John Dempsey Hospital, together with the UConn Health Network and the increased capacity for clinical trials research will generate $994 million annually in new output (2000 constant dollars), as illustrated in Chart 3.

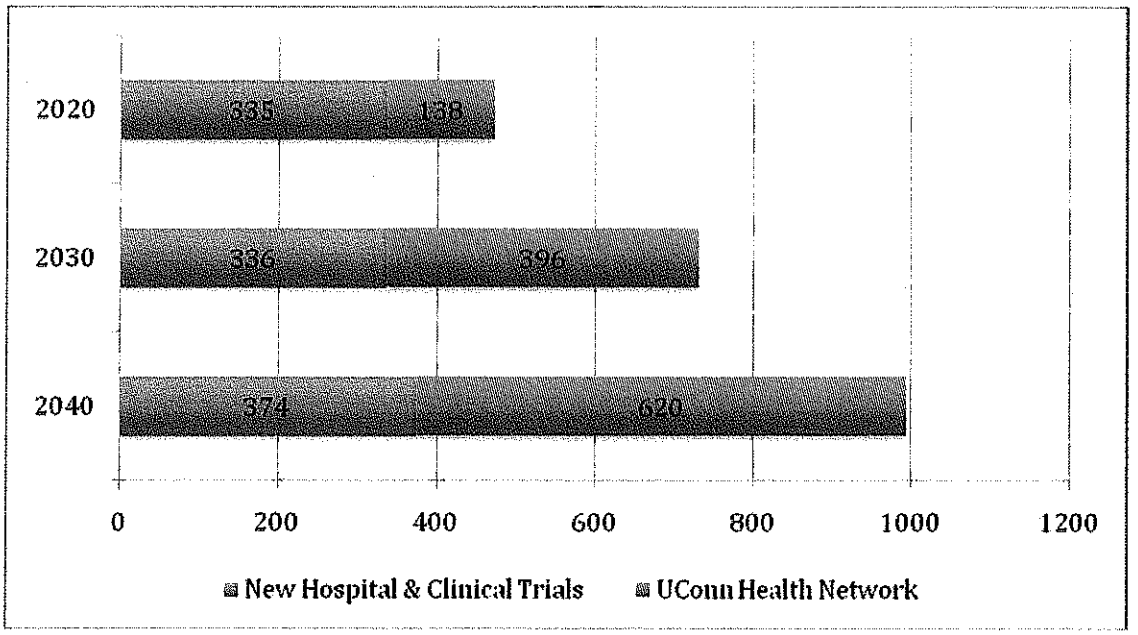



CHART 3: CRGDP IMPACTS (MILLIONS 2000 $)