2014

NAUH
NATIONAL ASSOCIATION OF URBAN HOSPITALS

[RESEARCH PROPOSAL TO DECREASE ENVIRONMENTAL HOSPITAL STRESS]

–RIONA MCGILLICUDDY

Image [Find a patient] courtesy of pixgood.com - http://pixgood.com/happy-patients-in-hospital.html

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Research Grant Proposal - Studying Hospital Environment's Effect on Patients and Staff

December 12, 2014

I am writing on behalf of the National Association of Urban Hospitals, respectfully submitting a proposal in request of a research grant. The purpose of our study is to view the effects of certain environments on patients and hospital staff to promote the reduction of stress and anxiety in hospital settings.

Urban hospitals today are overfilling and are suffering for it. Both the local population and the staff of these hospitals are stressed and anxious with the hospitals' inability to cope with the enormous number of hospitalizations both in accommodations and staff. The proposed research is an in depth study on the effects different hospital views and settings can have on the patients as well as the staff. Data collection will be handled through self-evaluative surveys, staff notes, and medical records. The results will go to furthering the improvement of hospital care both in quality and quantity.

If you have any further questions or concerns, please feel free to contact me at this email address or our Project Lead, Michael Lane, at michael@nauh.org. We can both be reached in the office at (703) 444-0989.

Best Wishes,

Riona McGillicuddy
Primary Investigator
National Association of Urban Hospitals

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1. Statement of the Problem

The issue with urban hospitals today is that they face a massive population they must support with fewer resources to confront it with. Hospitals have tried to combat this problem in the past by expanding and hiring more staff at great cost or undertaking methodical upgrades on their existing equipment. The study is an attempt to find an avenue to both hasten recovery time while relieving the stress of patients and faculty at these crowded facilities. Creating better scenery and atmosphere for both the professionals and patients in this high stress environment would help both improve the quality of the patients' lives and the quality of the care given to them.

1.1 Defining the Problem

Congestion in hospitals creates systemic barriers that keep local urban populations from receiving the treatment they need and deserve. There are millions of people being hospitalized each year in America. According to the CDC Report on *Rural and Urban Hospitals' Role in Providing Inpatient Care, 2010*, there were about 31 million people in inpatient care at urban hospitals out of the 35 million hospitalizations in the year 2010. "Urban hospital inpatients were more than twice as likely to have three or more procedures performed than rural hospital inpatients"[1] (CDC). The average length of stay at an urban hospital is 4.8 days, which is longer than the stay at a rural hospital, and yet 78% of the patients are discharged after hospitalization (well over ten percent more than rural hospitals.)[1] This means those who are staying for inpatient care are remaining for longer periods of time. Being in the hospital for any amount of time can be stressful, especially with the issue of the overcrowding of hospitals[2], which prevent hospitals from providing coordinated and quality care to the already underserved local population in the city. The big issue is the large number of people being served and the relatively small number of rooms available, leaving lots of patients without care and many other people stressed about the level of care given to those accepted in the halls of hospitals. Reducing the stress and anxiety felt in hospital settings will promote faster, less painful

[1] Center of Disease Control (CDC) Data Brief available at (http://www.cdc.gov/nchs/data/databriefs/db147.htm). Charts available in Index.
[2] Article on Hospital Overcrowding available at NCBI website ("Survey of Directors of Emergency Departments in California on Overcrowding." http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1070925/).

healing[3] for patients coming out of surgery as well as improved capacity for staff to provide quality care.

1.2 Solution Evaluation - Technique

The solution this study is striving toward is the eventual recession and/or removal of stress in the hospital setting, though the research will only be on the aspects comparing the effects of the environments themselves. The purpose is to assess the different types of sceneries that the urban hospitals, such as Ronald Reagan UCLA Medical Center, have to offer and compare their emotional and physical effect on patients and staff to see what is the most positively influential of surroundings.

2. Statement of Request

The National Association of Urban Hospitals would like to request funds to carry out the proposed research of hospital settings in the search for a stress-free environment. The total funds for the three-year study come to $1,594,205.28 to properly pay proposed salaries for staff, office space, equipment and supplies.

3. Description of Proposed Work

Research will be conducted ascertaining the effect of three different types of scenery on patients, as well as the staff attending to these patients, throughout the year.

3.1 Project Objectives

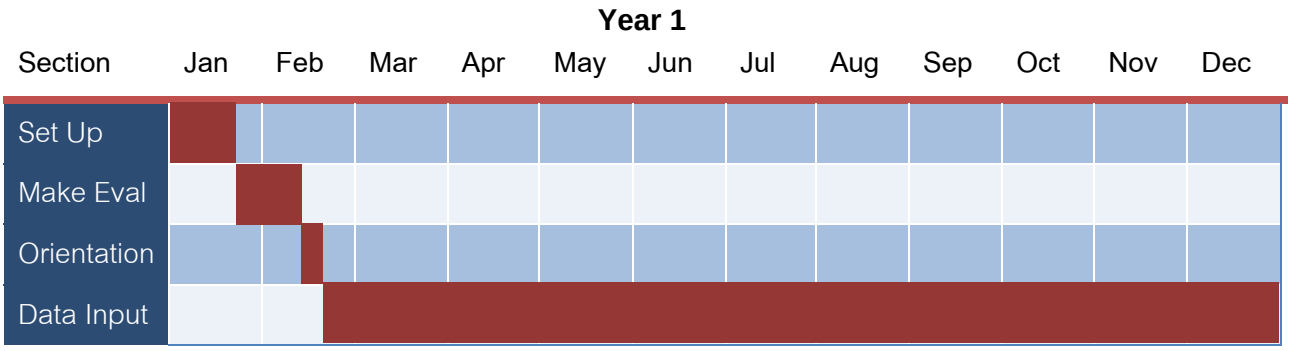
The objective of this study is to find the most positively impactful environment on the patients and staff that will be constructive in creating a stress- and anxiety-reduced setting at hospitals. The next step after this research study would be researching ways to refine that environment.

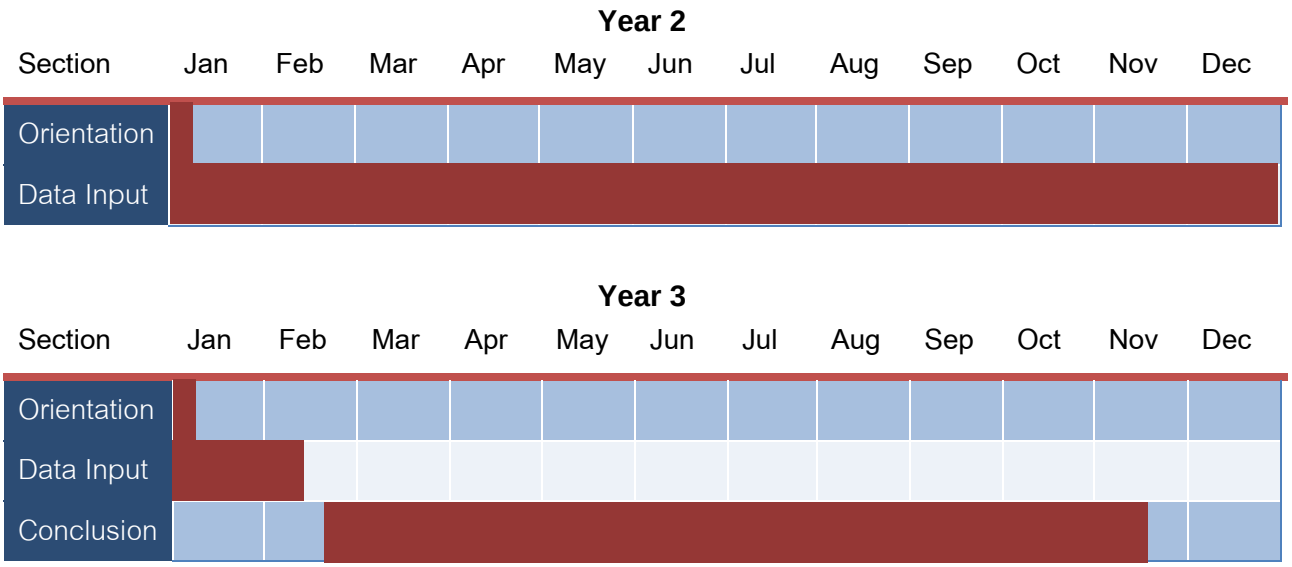
[3] Previous research has been conducted in the effects of natural landscapes on patients by Roger Ulrich (see "Stress Recovery during Exposure to Natural and Urban Environments" and "View Through a Window May Influence Recovery from Surgery" in Bibliography) which proves this is true on patients.

3.2 Methods

The researchers will conduct three levels of surveys on patients consisting of periodic self-evaluative surveys, medical reports such as intake of pain and anxiety relief medication or changes in blood pressure, and relevant notations on demeanor from staff. Inpatients will be chosen from two separate surgeries of short-term and long-term in hospital care after the surgery. Patients of the same surgery types will be matched in groups of three based on age, race, sex, type of surgery, general nature of previous hospitalizations, weight, and smoker or not smoker. All patients with abnormalities in the procedure or severe previous mental health instabilities will be discounted. Each group member will be placed in a different room with a view matching the description one of the three types of scenery the study is comparing. The three types of views that the study will evaluate are as follows: Natural, a view of natural landscapes such as parks or gardens or trees; Built-Active, a view of other man-made buildings with changing activity such as the street or apartment/office buildings; and Built-Inactive, a view of a manmade design with no variation such as a brick wall or curtains. Staff will be subject to periodic self-evaluative surveys as well. Dr. McGucket and Ms. Jones will work closely with the staff members to be sure the research goal is on track throughout the year. All data will be compared to archived medical records of the procedures.

3.3 Schedule





4. Available Facilities

The program would be starting from scratch, without any facilities to start the project. Much of the medical equipment used to check patients' vitals are already going to be in use at the hospitals as normal procedure. There is no medical equipment that the program must buy but, we must obtain access to the patients' medical records. The main concerns for equipment needs consist of the obtainment of a centralized office location near the hospital to keep an eye on the research, as well as computers, tablets, and computing software for each of the processors.

4.1 Detailed Description of Equipment

The IBM® SPSS® Data Collection Author is the primary tool the research team would use in the collection and management of data. The particular package listed in the budget is the "IBM SPSS Data Collection Author Concurrent User License + SW Subscription & Support 12 Months[4]," which offers multiple users under one subscription, regardless of the number of devices accessing the program, to input date at once. The license allows usage after a year but the software support ends after the 12 month period, though it may be renewed. Software can create anything from simple surveys to intricate data intake.

[4] Full description of software can be found at (http://www-01.ibm.com/software/passportadvantage/about_software_licensing.html#concurrent).

4.2 list of materials

The following is a list of basic requirements for the office and procedure of the study: Computers (3), Tablets (3), Copier/Printer/Fax Machine, Office Furniture and Supplies, File Cabinet, Safe & Key, Clipboards, Production of Evaluation Materials (Personal – Staff, Personal – Patient), Consent Documentation.

5. Personnel

5.1 Current Employees

Mr. Michael Lane, Project Director — Oversees development/operation, the hiring of project staff, and budget building; maintains link between NAUH and UniHealth; gives periodic updates to UniHealth, NAUH, and UCLA Medical Center Staff. Holds position in NAUH staff as expert on Medicare and Medicaid reimbursement policies and practices, and earned a bachelor's degree in health care administration from Century College and currently serves as president of the central Pennsylvania chapter of the Healthcare Financial Management Association (HFMA).

Dr. Fiddleford H. McGucket, Research Lead — Professor of Health Psychology at UCLA[5], Maintain track of research goal as well at data relevant data intake, creates evaluation surveys in relevant data fields.

Ms. Martha Jones, Research Assistant — Graduate Medical Student attending UCLA, Administers information session to nurses and doctors, take notes on project progress.

Full-Time Nurses at the Ronald Reagan UCLA Medical Center, Part-Time Employees in Study Miss P. Joy, Mister B. Tadashi, and Mister H. Gray

[5] Dr. McGucket is most notorious for his work on the effects of environmental stressors on memory in his "Society of the Blind Eye" paper. (http://archiveofourown.org/tags/Fiddleford%20H*d*%20McGucket/works)

5.2 Remaining Staff

Database Administrator – Collecting/managing data intake and organization regarding patient and hospital staff information while making sure to keep it safe

Doctors (3) – Ronald Reagan UCLA Medical Center Staff, wanted for continued evaluation of patients as well as self-evaluation of environmental affects

Consultants

Lawyer (Medical/Health Care)

6. Budget

The budget in the tables below features three years of the study with most of the cost vested in the payment of employees and rental of space within monitoring distance from the Ronald Reagan UCLA Medical Hospital.

Budget Summary			
Section	Cost Year 1	Cost Year 2	Cost Year 3
Personnel Total	$ 449,500.00	$ 447,000.00	$ 447,000.00
Equipment Total	$ 11,480.00	$ 100.00	$ 100.00
Remaining Expenses Total	$ 81,841.76	$ 78,591.76	$ 78,591.76
Sum Total	**$ 542,821.76**	**$ 525,691.76**	**$ 525,691.76**

6.1 Employee Salaries [6]

Personnel Salaries			
Section	Cost Year 1	Cost Year 2	Cost Year 3
Full Time			
Project Director	$ 122,500.00	$ 122,500.00	$ 122,500.00
Database Administrator	$ 77,000.00	$ 77,000.00	$ 77,000.00
Primary Researcher	$ 77,000.00	$ 77,000.00	$ 77,000.00
Secondary Researcher	$ 40,500.00	$ 40,500.00	$ 40,500.00
Part Time			
Primary Investigator	$ 2,500.00	$ -	$ -
Nurses (3) [Hospital Staff]	$ 75,000.00	$ 75,000.00	$ 75,000.00
Doctors (3) [Hospital Staff]	$ 55,000.00	$ 55,000.00	$ 55,000.00
Total	$ 449,500.00	$ 447,000.00	$ 447,000.00

[6] All salaries (except that of the Primary Investigator) calculated based on suggested prices on United States Department of Labor's *Bureau of Labor Statistics* website page and the amount of time spent on the study (http://www.bls.gov/home.htm). For specifics on each, see bibliography.

6.2 Equipment Purchases

Equipment Budget			
Section	Cost Year 1	Cost Year 2	Cost Year 3
Equipment			
Computers (3)	$ 2,400.00	$ -	$ -
Tablets (3)	$ 300.00	$ -	$ -
Data Collection Software	$ 7,180.00	$ -	$ -
Office Supplies			
Office Furniture	$ 1,200.00	$ -	$ -
Copier/Printer	$ 200.00	$ -	$ -
Misc. Supplies	$ 100.00	$ 100.00	$ 100.00
Locks and Keys	$ 100.00	$ -	$ -
Total	$ 11,480.00	$ 100.00	$ 100.00

6.3 Miscellaneous Remaining Expenses

Remaining Expenses			
Section	Cost Year 1	Cost Year 2	Cost Year 3
Consultants			
Health Care Lawyer	$ 22,500.00	$ 22,500.00	$ 22,500.00
Instruction			
Hospital Staff Orientation	$ 3,250.00	$ -	$ -
Research Subject Compensation (Total)[7]	$ 3,000.00	$ 3,000.00	$ 3,000.00
Facilities			
Office Space Rental	$ 42,000.00	$ 42,000.00	$ 42,000.00
Communication			
Telephone	$ 180.00	$ 180.00	$ 180.00
Internet Connection (w/ Security Software)	$ 923.76	$ 923.76	$ 923.76
Fax	$ 360.00	$ 360.00	$ 360.00
P.O. Box	$ 128.00	$ 128.00	$ 128.00
Other Expenses			
Repairs	$ 500.00	$ 500.00	$ 500.00
Total	$ 72,341.76	$ 69,091.76	$ 69,091.76

7. Summary

7.1 Benefits

The benefits from this research study would propel urban hospitals away from a place of stress toward better quality service to a larger number of potential patients. Initially, the conclusions of our research will benefit local hospitals by finding the basis of optimal working environment. Additionally, the results may encourage further research into the area which would make the beneficial changes in environment more accessible and cost effective across the United States.

[7] Research Subject Compensation based off standards and morals set up by this group (http://www.research.ucsf.edu/chr/Recruit/chrconsentBySections.asp#payment)

7.2 Comparison

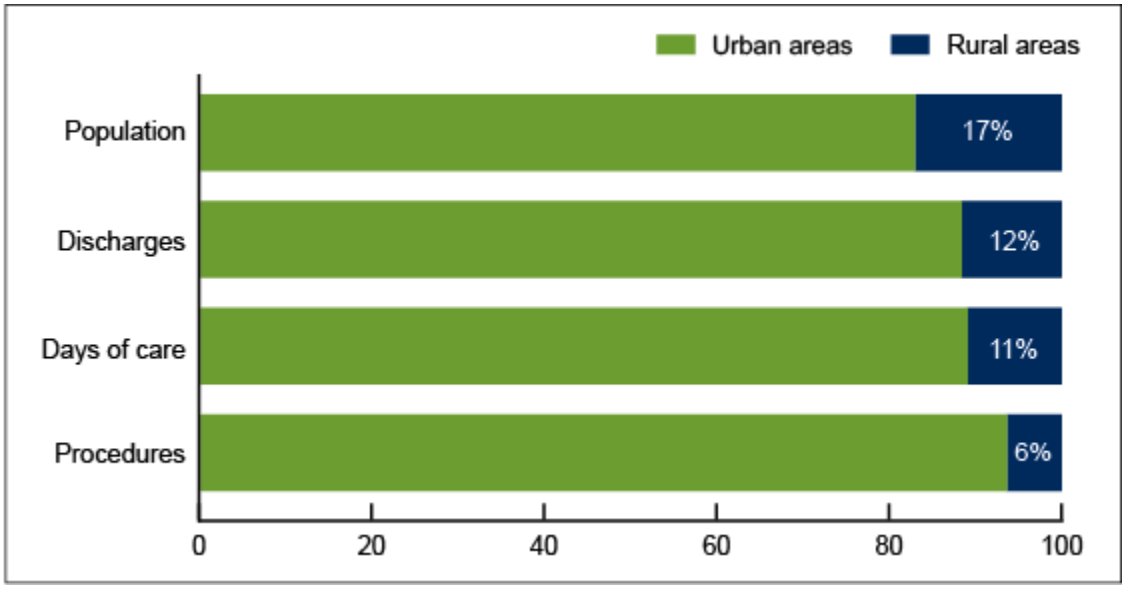
The National Association of Urban Hospitals is willing to take responsibility for researching a new and attainable path promoting the enhancement of public and community aesthetics instead of working on expansion. Other programs are attempting to tackle the issue of overcrowding by finding funds to add on to or building more hospitals and hiring more staff, expanding the resources for higher output, responding to a large population of patients with a large number of staff. Previous research has been conducted with focus only on patients and not staff, on short-term rather than long-term inpatients, during specific times of year when there is foliage, and/or only comparing natural views to static and invariable scenery. This proposal is attempting to take on the different aspects in other studies mentioned above, and bring them together into one comprehensive analysis of hospital environments with the focus of alleviating unnecessary stressors keeping staff and patients from doing their optimal best.

7.3 Conclusion

The current overcrowding of the nation's hospitals and high demand for care have already led to a plethora of issues, both in quality and availability of care, causing stress and anxiety both for the people giving and receiving treatment. It is crucial to address the issues urban hospitals are facing with overcapacity and underemployment in an attainable, cost-effective way.

Appendix

Figure 1. Population and inpatient care in rural and urban areas: United States, 2010



NOTE: Urban areas are those defined by the Office of Management and Budget as metropolitan, and rural (nonmetropolitan) areas are defined as those outside of metropolitan areas.

SOURCE: CDC/NCHS, National Hospital Discharge Survey, 2010.

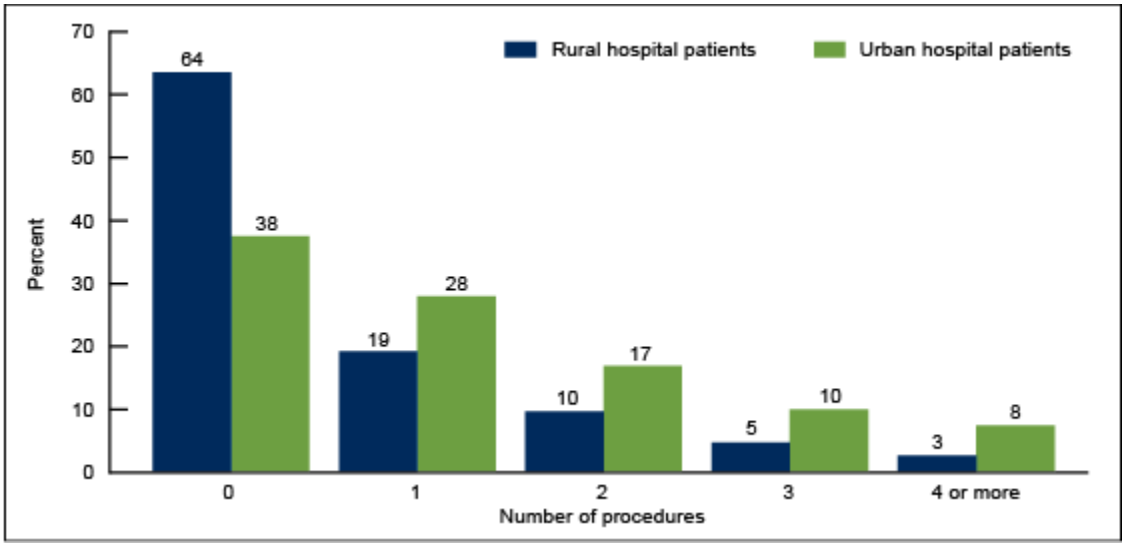
Table. Characteristics of rural and urban hospital inpatients, 2010

	Rural hospital inpatients	**Urban hospital inpatients**
Total number	4.1 million	31.0 million
Age 65 and over[1] (percent)	51	37
Medicare[1] (percent)	52	41
Medicaid (percent)	15	18
Average number of diagnoses	7.9	7.4
Average length of stay	4.5 days	4.8 days

[1]Difference is statistically significant at the 0.05 level.

SOURCE: CDC/NCHS, National Hospital Discharge Survey, 2010.

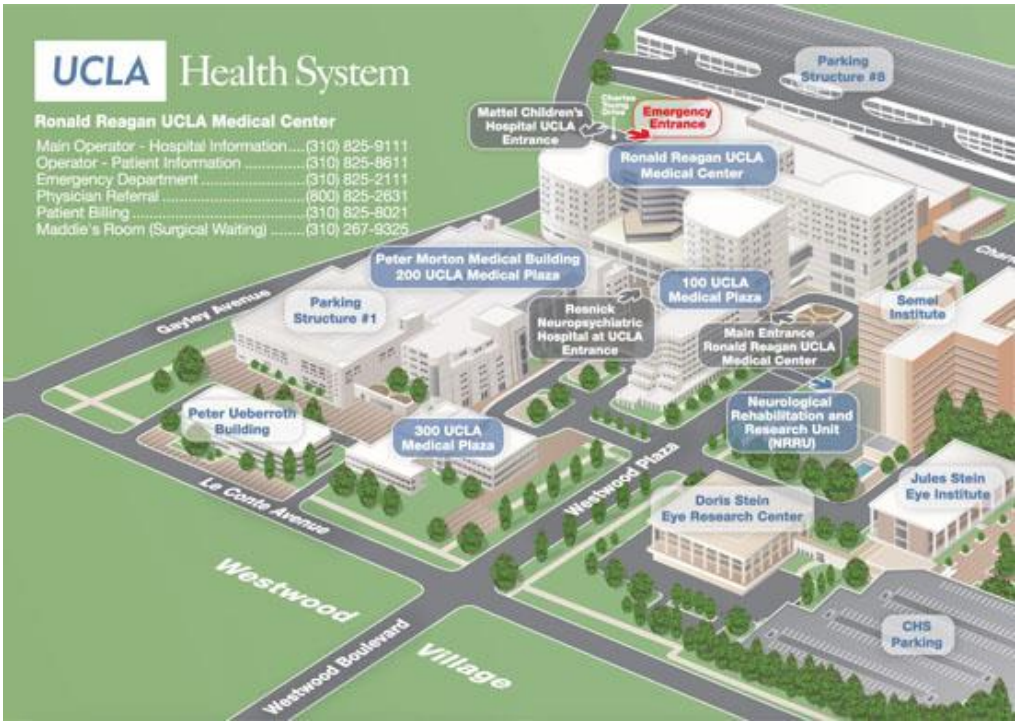
Figure 3. Inpatient procedures in rural and urban hospitals, 2010



NOTE: For each number-of-procedures category, the difference is statistically significant at the 0.05 level.

SOURCE: CDC/NCHS, National Hospital Discharge Survey, 2010.

UCLA Health System Map including Ronald Reagan Medical Center



SOURCE: UCLA Department of Surgery Website, Maps/Directions page

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