

CALIFORNIA HEALTH FACILITIES FINANCING AUTHORITY
Children’s Hospital Bond Act of 2008 (Proposition 3)

Staff Summary
Resolution No. CHP-3 2017-04
October 26, 2017

Applicant: University of California, Irvine Medical Center Grant # UCI-01-03
101 The City Drive South
Orange, California 92868
Orange County

Project Sites: Same as above and at other specified licensed and satellite locations in Anaheim, Irvine, Orange, and Santa Ana in Orange County.

Amount Requested: \$9,915,198

Summary of Grant Amounts	Proposition 3
Eligible Amount	\$39,200,000
less previous awards	(0)
less requested amount	(9,915,198)
Remaining Amount Eligible (if requested amount is approved)	\$29,824,802

Description of Applicant:

University of California, Irvine Medical Center (“UCIMC” or the “Hospital”) is a general acute care hospital with a current license from the California Department of Public Health. The Hospital’s audited financial statements for the Fiscal Year ending June 30, 2016 were submitted and are free of “going concern” language. ¹ Of the Hospital’s 369 General Acute Care beds, 45 in the Neonatal Intensive Care Unit (“NICU”) are exclusively for pediatric patients and 8 in the Burn Unit are utilized for pediatric patients as needed. Additionally, the Emergency Department and Level II Pediatric Trauma Center provide care to children as well as adults.

Projects:

UCIMC is requesting funds for pediatric medical equipment and for an Electronic Medical Record (“EMR”) system.

The equipment purchase includes the replacement of existing but outdated models of central cardiac monitors, brain wave monitors, and an ultra sound machine as well as the addition of new equipment not previously utilized at the hospital including a breastmilk tracking system, a surgical laser device, and a noninvasive oxygenation monitor, among others. A portion of the equipment has already been purchased and is in use and some of the equipment will be purchased once the grant has been approved. All of the equipment will be utilized exclusively for pediatric patients.

¹ The absence of “going concern” language tends to suggest the organization is in good operational health for that FY. The Authority’s regulations define “Going Concern Qualification” in sections 7030(n) and 7051(n) for Proposition 61 and Proposition 3, respectively.

The Hospital is seeking funds for the implementation of an EMR system including for computer hardware and software as well as capitalized costs for consultants. The system allows for the electronic storage and sharing of health information such as patient care records, diagnoses, test results, and prescribed medications. UCIMC expects the system will ultimately benefit patients by increasing efficiency and facilitating improvements to patient care. As UCIMC treats both adult and pediatric patients, the grant amount for the EMR project has been limited to the proportional costs associated with records for pediatric patients.

Proposition 3 Evaluation Factors:

Staff evaluated the Hospital's projects through review of the application and other submitted materials using the six factors identified in Proposition 3.

Factor 1: The grant will contribute toward expansion or improvement of health care access by children eligible for governmental health insurance programs and indigent, underserved, and uninsured children:

Equipment Project

Central Cardiac Monitoring Equipment:

The Philips IntelliVue MX700 Central Cardiac Monitors purchased for the UCIMC NICU replaced outdated technology and feature advanced monitoring capabilities and other clinical decision support tools. The updated equipment is expected to allow UCIMC staff to be more proactive and provide more efficient care to micro-premature infants by more quickly dedicating problematic changes in patient status and facilitating speedier access to needed interventions. Reducing complications and better responding to changes in patient status could result in shorter admissions allowing the NICU to care for more patients, thus expanding access.

Omni Mobility Solution Breastmilk System:

The Omni Breastmilk system is a new platform used in the NICU which allows for the electronic tracking and monitoring of breastmilk used for patients. The system utilizes a mobile application which verifies and tracks each infant milk bottle and feeding time. The system ensures that the correct infant is receiving the correct breastmilk and that all infants are being fed at the correct intervals. The Hospital explained that the Omni system has helped to improve workflow efficiencies by eliminating the need for multiple professionals to monitor the individual feeds of each patient which allows staff to spend more time on other priorities such as patient care.

The Central Cardiac Monitors and Omni Mobility Solution Breastmilk System are both used in the UCIMC NICU which last fiscal year operated at capacity while providing care for approximately 500 infants, more than two thirds of which were covered by government health insurance programs such as MediCal.

JOULE Surgical Laser:

The Sciton, Inc JOULE surgical laser is a new device used at UCIMC's Regional Burn Center that expands the Hospital's ability to provide innovative non-surgical techniques to treat burn scars without the need for skin grafts. The Laser platform was needed in the Operating Room for pediatric patients who require anesthesia for laser treatments. The therapy has been provided

to approximately 50 pediatric patients who otherwise would not have been able to benefit from the technology, thus expanding access. Approximately one-third of the patients treated at the burn center are pediatric of which approximately 60% are covered by government health insurance programs such as MediCal.

Epic EMR Project:

The Hospital's implementation of the Epic EMR system is expected to provide a variety of enhancements to the patient care delivery experience that are expected to increase efficiency, reduce complications, and improve access to care.

By having an integrated system, UCIMC expects efficiencies to be created throughout the entire health system. Providers will be able to see what tests have been performed and the results, which the system automatically compares against normally expected values. The Hospital expects the system to reduce the ordering of unnecessary or duplicative tests and reduce office visit time, thereby freeing up capacity.

The Epic system will also provide opportunities for patients to become more involved in their healthcare. Patients will be able to access all of their health records via an online portal which will have features for patients to schedule appointments, securely message their healthcare providers, video conference with physicians, and access patient centered education information for specific conditions. A module within the system will streamline the process of prescription refills, which will be coordinated by a nurse. By increasing efficiency, the Hospital expects these features to decrease unnecessary office visits and increase capacity, thus expanding and increasing access to care.

The Hospital also expects the system to improve care planning and case management by allowing programs developed at other sites within the UC Health System to be deployed at UCIMC. Additional opportunities also exist in the area of clinical research as the electronic data can be more readily accessed than with the systems currently in place.

Factor 2: The grant will contribute toward the improvement of child health care or pediatric patient outcomes:

Equipment Project:

Central Cardiac Monitoring Equipment:

The Philips IntelliVue MX700 Central Cardiac Monitors feature a variety of improvements over the outdated equipment they replaced which are expected to improve patient care and outcomes. Design features include a space saving layout that requires fewer cables and provides a larger, more intuitive display which offers an expanded view of infant's vital signs that can expedite recognition of problematic conditions thus speeding time to treatment. The Philips system also provides a broad array of clinical decision support tools and applications which provide clinicians enhanced ways to proactively surveil subtle changes in an infant's condition as well as screen for infection. The additional features provided by the new cardiac monitors which provide healthcare providers with the tools to respond more proactively are expected to improve patient outcomes than with the previous, outdated equipment.

Omni Mobility Solution Breastmilk System:

The Omni Mobility Solution Breastmilk System more efficiently facilitates the tracking and monitoring of breast milk consumption for patients in the NICU compared with the previous tracking method. The system also records statistics based on the user, the patient, the milk, and the time which enhances the ability of healthcare providers to monitor patient progress. Overall the system contributes to improved healthcare and patient outcomes by providing a more effective way to promote the best practice of breastfeeding and allowing healthcare providers to spend more time on direct patient care as the documentation process is streamlined.

JOULE Surgical Laser:

The Sciton, Inc JOULE surgical laser expanded UCIMC's ability to provide noninvasive treatments for pediatric burn patients which improves pediatric patient outcomes. The platform offers a combination of multiple laser wavelengths through three delivery methods: arm, fiber, or broadband light. Without the JOULE laser system some pediatric patients being treated at UCIMC for burn wounds may have otherwise required surgical interventions which are more invasive. Having the option to utilize less invasive treatment options improves children's healthcare.

EMR Project:

Implementation of the Epic EMR system provides opportunities for UCIMC to improve patient care by expanding the availability of patient care records across organizations, expanding patient education tools, and empowering providers with additional clinical decision making and diagnostic tools.

The CareEverywhere features being deployed with Epic at UCIMC allow the sharing of patient records such as tests and procedure results between organizations in an easy to use manner. Patient care providers at organizations other than UCIMC will be able to review records for care patients have received at UCIMC, and providers at UCIMC will be able to review records for care patients have received at other organizations throughout the community. The Hospital expects these information sharing initiatives to speed diagnosis time, and reduce duplication of tests and procedures which will improve safety and pediatric patient care by lowering radiation exposure and invasive needle sticks as the need to repeat tests and procedures decreases.

The EPIC EMR system also contains patient education tools based on nationally approved materials and practice guides which can help patients and their parents better understand their conditions, treatment plans, and medications. The Hospital explained that the educational tools facilitate patient self-therapy and that research has shown that patients and parents who are more involved in their care or their children's care have better outcomes.

The EMR system being implemented at UCIMC includes decision making and diagnostic tools and best practice alerts to physicians to encourage the use of standardized care plans based on specific health conditions. The Hospital expects this capability to improve the overall patient care experience for children and their parents as it better assists providers in proactively managing patient wellness, resulting in better outcomes. An example of a diagnostic tool available within the system displays medication and prescription information as well as allergy documentation, vitals review, and past contraindications which UCIMC expects to improve patient safety by reducing over medication which has been shown to impede long term growth and development.

Factor 3: The children’s hospital provides uncompensated or undercompensated care to indigent or public pediatric patients:

Inpatient Care: As a safety net provider, UCIMC plays a significant role in Orange County’s health care system and cares for the county’s largest share of underserved populations. According to data from the California Office of State Health Planning and Development (“OSHPD”), for the year ending December 31, 2016, the 25 acute care hospitals in Orange County provided approximately \$163 million in charity care of which UCIMC comprised approximately \$45 million or 27%.

OSHPD data for the year ending December 31, 2015 illustrate the contributions made by UCIMC as a safety net provider. UCIMC operated 6.9% of the licensed hospital beds in Orange County yet provided 10.5% of the total hospital inpatient days and 16.8% of the Medi-Cal inpatient days. While UCIMC provided 16.3% of the total outpatient visits in Orange County it provided 23.5% of the outpatient visits utilized by Medi-Cal patients. Overall, more than two-thirds of neonatal patients at UCIMC are covered by government health insurance programs such as Medi-Cal.

Federally Qualified Health Centers (“FQHCs”): UCIMC also operates two community-based Family Health Centers in Anaheim and Santa Ana that provide high-quality and comprehensive primary care to patients of all ages regardless of health insurance status or ability to pay. The FQHCs provide approximately 20% of the community clinic-based primary care in their respective cities and 6% for all of Orange County. For the year ending December 31, 2016, 75% of the care provided in the FQHCs was for children, of which all were uninsured, underinsured, or insured by government health insurance programs.

Factor 4: The children’s hospital provides services to vulnerable pediatric populations:

UCIMC provides unique and specialized healthcare services and outreach to children in Orange County and beyond. The Neonatal Intensive Care Unit (“NICU”) is one of only two Regional Level NICUs in Orange County and cares for more than 400 premature infants and infants with complex medical needs each year. The Regional Burn Center at UCIMC treats approximately 200 children annually for all kinds of burns, from mild to severe and life-threatening. The Hospital’s Emergency Department cares for approximately 3,900 children per year and includes a Level II Pediatric Trauma Center.

The Hospital also operates numerous educational and community outreach programs and provides support for pediatric health. Some of the public programs offered include a food pantry and well child clinic, a pediatric gender diversity program, a van clinic which provides services at local schools, a pediatric mobile eye exam program, a clinic which operates in a community park, and other programs which provide education on injury prevention, healthy eating, and safety.

Factor 5: The children’s hospital promotes pediatric teaching or research programs:

The UCIMC Department of Pediatrics oversees an extensive medical education enterprise which in concert with major affiliations with Children’s Hospital of Orange County and Miller Children’s Hospital in Long Beach trains more than 150 medical students each year. Over 90 pediatric and combined pediatric-anesthesia residents are trained at the hospitals annually. The department also offers a residency in medical genetics. The majority of residents from UCIMC

remain and practice in California. UCIMC also offers fellowships in the areas of neonatal intensive care, pulmonary medicine, combined hematology/oncology, neurology, and neonatal-perinatal medicine. As with residents, the majority of fellows also remain and continue to practice in California. The UCIMC Department of Pediatrics is also home to the Graduate Program in Genetic Counseling which is the only of its kind within the UC system and provides education and professional training in counseling and medical genetics, leading to a master's degree.

UCIMC participates in a wide variety of research programs and clinical trials for the betterment of pediatric healthcare. The Pediatric Exercise Research Center conducts translational research to address the interaction of physical activity and muscle mass in the context of health, disease, and harmful conditions in children and adolescents. The Epilepsy Research Center is a multi-departmental initiative which brings more than 25 scientists from different disciplines together to support epilepsy-related research and training. The Center for Autism Research and Treatment is a public-private partnership that brings together scientists from diverse areas of study with the goal of developing and effective drug therapy for Autism Spectrum Disorder and is integrally connected to the Center for Autism and Neurodevelopmental Disorders which focuses on the development of novel behavioral interventions and strategies for better outcomes for children with Autism Spectrum Disorder, ADHD, and other neurodevelopmental disorders. The Conte Center on Brain Programming in Adolescent Vulnerabilities addresses the complex developmental mechanisms that contribute to adolescent mental illnesses. Current clinical trials available to children at UCIMC include, but are not limited to, enzyme replacement therapy for infants with Lysosomal Acid Lipase Deficiency and a medication for the treatment of rare genetic disorders of obesity such as Prader-Willi Syndrome.

Factor 6: Demonstration of project readiness and project feasibility:

Equipment Project:

Approximately \$675,900 in equipment has already been purchased and approximately \$854,455 in equipment is expected to be purchased within the next six months.

EMR Project:

Implementation of the EMR project began in August of 2015 and is planned to be operational in November of 2017. The UCIMC EMR system will effectively be an expansion of the system currently in place at University of California, San Diego Hospitals. Leveraging off the existing and fully functioning system is expected to minimize risks associated with implementing an entirely new system such as issues that cannot be foreseen during software and training development. The project is currently on time and under budget. As of October 1, 2017 the EMR project has incurred approximately \$54.5 million in costs. On-going implementation and optimization tasks will continue to December 2018.

As UCIMC serves both pediatric and adult patients, a proportionate share is applied to the eligible costs for the EMR project in order to determine the amounts allocable to providing care to children. Staff worked with UCIMC and determined that a share of 14% based on number of patient care records for those under age 18 in Fiscal Years 2014, 2015, and 2016.

Total EMR project cost is estimated to be \$74,073,374. Some of the project costs such as travel and ongoing software fees are not eligible for reimbursement with grant funds. The proportionate share of 14% will be applied to the total amount eligible for grant funds of \$59,484,502 resulting in \$8,327,830 to be paid for by the grant.

Sources of Funds:

Grant Request	\$ 9,915,198
Applicant Internal Funds	<u>65,745,544</u>
Total	<u>\$ 75,660,742</u>

Uses of Funds:

Equipment	1,530,355 ²
IT	74,073,374 ³
Grant COI and Admin	<u>57,013</u>
Total	<u>\$ 75,660,742</u>

Legal Review:

Staff has received and reviewed the Eligibility, Legal Status Questionnaire, and Religious Due Diligence documentation. All documentation satisfies the Authority’s requirements.

Staff Recommendation:

Staff recommends the Authority approve Resolution No. CHP-3 2017-04 for the University of California, Irvine Medical Center to provide a grant not to exceed \$9,915,198 (less issuance and administrative costs), subject to all requirements of the Children’s Hospital Program of 2008.

² To be fully funded by the grant.
³ \$8,327,830 to be funded by the grant.

RESOLUTION NO. CHP-3 2017-04

**RESOLUTION OF THE CALIFORNIA HEALTH
FACILITIES FINANCING AUTHORITY APPROVING
EXECUTION AND DELIVERY OF GRANT FUNDING
UNDER THE CHILDREN'S HOSPITAL BOND ACT OF 2008
TO UNIVERSITY OF CALIFORNIA, IRVINE MEDICAL CENTER**

WHEREAS, the California Health Facilities Financing Authority (the "Authority"), a public instrumentality of the State of California, is authorized by the Children's Hospital Bond Act of 2008 (Pt. 6.1 (commencing with Section 1179.50), Div. 1, Health and Safety Code; hereafter the "Act") and implementing regulations to award grants from the proceeds of general obligation bonds in an amount not to exceed \$39,200,000 less the bond issuance and administrative costs to University of California, Irvine Medical Center ("Grantee") to finance eligible projects; and

WHEREAS, Authority staff reviewed the Grantee's application against the eligibility requirements of the Act and implementing regulations and, pursuant to the Act and implementing regulations, recommends approval of a grant in an amount not to exceed \$9,915,198 less the bond issuance and administrative costs to the Grantee for the eligible project (the "Project") described in the application;

NOW THEREFORE BE IT RESOLVED by the California Health Facilities Financing Authority, as follows:

Section 1. The Authority hereby approves a grant of \$9,915,198 less bond issuance and administrative costs, to the Grantee to complete the Project as described in the Children's Hospital Program Application and Exhibit A to this Resolution (Exhibit A is hereby incorporated by reference) within a project period that ends on June 30, 2019.

Section 2. The Executive Director is hereby authorized for and on behalf of the Authority, to approve any minor, non-material changes in the Project described in the application submitted to the Authority and extend the project period completion date identified in Section 1 as authorized under the Act and implementing regulations. Nothing in this Resolution shall be construed to require the Authority to provide any additional funding, even if more grants are approved than there is available funding. Any notice to the Grantee shall indicate that the Authority shall not be liable to the Grantee in any manner whatsoever should such funding not be completed for any reason whatsoever.

Section 3. The Executive Director is hereby authorized and directed, for and on behalf of the Authority, to draw money from the Children's Hospital Bond Act Fund (2008) not to exceed those amounts approved by the Authority for the Grantee. The Executive Director is further authorized and directed, for and on behalf of the Authority, to execute and deliver to the Grantee any and all documents necessary to complete the transfer of funds that are consistent with the Act and implementing regulations.

Section 4. The Executive Director of the Authority is hereby authorized and directed to do any and all things and to execute and deliver any and all documents which the Executive Director deems necessary or advisable in order to effectuate the purposes of this Resolution and the transactions contemplated hereby.

Section 5. This Resolution expires June 30, 2019

Date Approved: _____

EXHIBIT A

PROJECT DESCRIPTION

The proceeds of the grant will be used by University of California, Irvine Medical Center for reimbursement of costs for the purchase and installation of pediatric patient care equipment for the proportional share of eligible pediatric costs for implementation of an Electronic Medical Records system on the hospital campus located at 101 The City Drive South, Orange, California 92868 and at other specified licensed and satellite locations in the cities of Anaheim, Irvine, Orange, and Santa Ana in Orange County, California.