Introduction

UC Davis Medical Center, part of the UC Davis Health System, is a comprehensive academic medical center where clinical practice, teaching and research converge to advance human health. UC Davis Health System includes the 619-bed acute-care teaching hospital, one of the country’s best medical schools, an 800-member physician’s practice group and the Betty Irene Moore School of Nursing. UC Davis Medical Center has the region’s only Level I pediatric and adult trauma centers; the UC Davis MIND Institute, devoted to finding treatments and cures for neurodevelopmental disorders; the UC Davis Children’s Hospital, the region's only National Cancer Institute-designated comprehensive cancer center, and innovative stem cell institute. The UC Davis Medical Center plays an essential role as a safety net provider and tertiary referral center for inland Northern California, offering the only such resources between San Francisco and the Nevada and Oregon borders. It further extends its reach through the award-winning telemedicine program, which gives remote, medically underserved communities throughout California unprecedented access to specialty and subspecialty care.

Background

The Patient Protection and Affordable Care Act (ACA) added new federal requirements for not-for-profit hospitals and health systems, including academic medical centers and teaching hospitals such as UC Davis Medical Center.

A key provision in the law is Section 501(r) related to community health needs assessments. In order to maintain tax-exempt status under Section 501(c) (3), not-for-profit hospitals are required to conduct a community health needs assessment (CHNA) and develop a companion implementation plan.

UC Davis Medical Center has a twenty year tradition of collaborating with other local not-for-profit health systems to produce a comprehensive CHNA reflective of the greater Sacramento region. An outside firm, Valley Vision, conducted the CHNA and identified the most prevalent community health needs, and uncovered the underlying social determinants of health care. Both qualitative and quantitative research was applied to highlight key findings. These findings are contained in the companion document, 2013 Community Health Needs Assessment, and the report serves as the basis for this implementation plan.

Service Area Description/Determination

For purposes of the ACA, and the new federal requirement to conduct a CHNA and implementation plan, the medical center hospital service area was determined by analyzing inpatient discharge data that indicated more than 60 percent of these patients were Sacramento County residents.

Summary of UC Davis Medical Center’s Community Health Needs Assessment (CHNA)

The objective of the CHNA was to provide UC Davis Medical Center the following necessary information (below): 1) Identify a community health improvement plan; 2) Identify communities and specific groups within these communities experiencing health disparities, especially as these disparities relate to chronic disease; 3) Further identify contributing factors that create both barriers and opportunities for these populations to live healthier lives

This process relied on both primary and secondary data as described in the accompanying CHNA. When examining the quantitative findings with those of the qualitative data, a consolidated list of priority health needs of the UC Davis Medical Center service area was compiled and is shown below.

Priority Health Needs

1. Diabetes
2. Heart Disease
3. Stroke
4. Hypertension
5. Mental Health
6. Substance Abuse
7. Self-Inflicted Injury
8. Respiratory Illness (COPD, Asthma, Bronchitis)
9. Asthma
10. Assault and Unintentional Injury
11. Accidents

In keeping with the emphasis on health disparities and social determinants of health, the CHNA also unveiled zip-code specific influences on community health and safety, which were defined as follows:

Key Environmental and Behavioral Health Drivers
1. Lack of access to primary health care services
2. Lack of access to mental health treatment and prevention services
3. Lack of access to coordinated care
4. Lack of access to healthy food
5. Safety as a health issue
6. Stress of living in poverty
7. Unhealthy food environment
8. Limited opportunities for physical activity engagement
9. Concerns over personal safety
10. Lack of alcohol/drug abuse treatment programs and prevention programs

Communities of Concern

Analysis of both primary and secondary data revealed 15 specific “Communities of Concern” in Sacramento County where residents were living with a high burden of disease. These 15 communities had consistently high rates of negative health outcomes - the eleven “priority health needs” described earlier that were identified in the CHNA - that frequently exceeded county, state, and U.S. Centers for Disease Control and Prevention’s Healthy People 2020 benchmarks. They were confirmed by area experts as geographic outliers prone to experience poorer health outcomes relative to other communities in the medical center’s hospital service area.

Criteria Determining Needs to be Addressed

As a public research university and academic medical center, UC Davis has a mission to serve the community at-large, the residents of California and the nation. Governed by the Board of Regents of the University of California, UC Davis Medical Center is a steward of the public trust. Therefore, in assessing and prioritizing the health needs of the community, UC Davis is obligated to take a broad, societal view that incorporates public health goals into its planning process. In accordance with this, the institution relies on key external benchmarks, such as the CDC’s Healthy People 2020 Goals, to influence institutional strategic planning and programmatic decisions. Currently, the institution’s multi-year strategic initiatives are Cancer, Cardiovascular, Neuroscience, and Injury and Healing.
UC Davis Medical Center also took into account other criteria for determining needs to be addressed, including:
- Ability to address broadly the social determinants of health and equitable delivery of health care
- Commitment to teaching and research missions
- Community role as disproportionate share hospital and safety net provider
- Leadership, staff and volunteer resources
- Capacity to leverage existing programs, services, and resources

The mission, strategic initiatives, and additional criteria, determined the top health needs upon which the implementation plan is built. UC Davis Medical Center evaluated each of the 11 priority health needs within the Medical Center service area and concluded that key issues could be organized thematically, by reducing the list to four categories. Based on the information noted above, the grid below demonstrates the CHNA rankings and priorities.

<table>
<thead>
<tr>
<th>Rank</th>
<th>Priority</th>
<th>Health Needs</th>
<th>Unique UC Davis Medical Center Assets</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Accident and Injury Prevention</td>
<td>- Self-inflicted injury&lt;br&gt;- Assault and unintentional injury&lt;br&gt;- Accidents</td>
<td>- Level 1 Pediatric and Adult Trauma Center&lt;br&gt;- Comprehensive Children’s Hospital&lt;br&gt;- Trauma Prevention and Outreach program&lt;br&gt;- Firefighter’s Burn Institute&lt;br&gt;- California Poison Control System center&lt;br&gt;- Communities and Health Professionals Together&lt;br&gt;- Violence Prevention Research Program</td>
</tr>
<tr>
<td>2</td>
<td>Cardiovascular Health</td>
<td>- Heart disease&lt;br&gt;- Stroke&lt;br&gt;- Hypertension</td>
<td>- Women’s Cardiovascular Medicine Program&lt;br&gt;- Advanced Primary Stroke Center certification&lt;br&gt;- American Heart Association “Get with the Guidelines” gold plus rating&lt;br&gt;- U.S. News and World Report high performing hospital in cardiology and heart surgery&lt;br&gt;- Institute for Population Health Improvement</td>
</tr>
<tr>
<td>3</td>
<td>Chronic Disease Management and Care Coordination</td>
<td>- Diabetes&lt;br&gt;- Respiratory illness&lt;br&gt;- Asthma</td>
<td>- UC Davis Asthma Network (UCAN)&lt;br&gt;- U.S. News and World Report high performing hospital in diabetes and pulmonology&lt;br&gt;- Chronic Disease Care Management and Education&lt;br&gt;- Institute for Population Health Improvement</td>
</tr>
<tr>
<td>4</td>
<td>Mental Health and Substance Abuse</td>
<td>- Mental health&lt;br&gt;- Substance abuse</td>
<td>- Center for Reducing Health Disparities&lt;br&gt;- Sac EDAPT and EDAPT programs&lt;br&gt;- IMPART residency training program</td>
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</tbody>
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The CHNA implementation plan was derived using a deliberative internal process that applied the qualitative and quantitative data against key measurements noted above: criteria, ranking and operational considerations. The results of this effort are detailed below:

**CHNA Implementation Plan Priorities, Objectives and Strategies**

**Priority #1 – Accident and Injury Prevention**

**Objective A:** Prevent common childhood injuries through multi-lingual education, free distribution and training on appropriate use of equipment, e.g. life jackets, car seats, and bicycle helmets

**Strategies:**
- Provide community outreach and education (schools, fire departments, health fairs)
- Conduct free car seat safety classes in English and Spanish
- Disseminate literature in English, Russian, Spanish and Vietnamese

**Objective B:** Reduce the incidence of falls among seniors aged 65 and older
Strategies:
- Provide free, intensive community training “Stepping On” to targeted older adults who have fallen within the past year
- Develop educational materials on fall prevention to be distributed to community partners

Objective C: Raise awareness of underage drinking
Strategies:
- Gather surveillance data from UC Davis Level I trauma center on youths being treated for intoxication to inform Sacramento Youth and Alcohol Coalition
- Work in partnership with Sacramento Youth and Alcohol Coalition, law enforcement agencies, schools and community based organizations to address the issue

Objective D: Offer multi-lingual poison control interventions 24/7, 365 days per year
Strategies:
- Maintain Northern California’s 24-hour hotline for emergency information about potential poisoning staffed by trained specialists in pharmacy, nursing, and medical toxicology

Objective E: Prevent burn injuries, conduct research on burn outcomes and support victims of burn injuries
Strategies:
- Raise awareness of burn prevention through community education and outreach in partnership with Shriners Hospital for Children and Firefighters Burn Institute
- Advance the work of the Burns Outcomes Research Infrastructure Project aimed to develop and disseminate best practices for treating patients
- Offer Burn Recovery Support Group meetings to aid burn victims

Objective F: Research and investigate causes of injury, accidents and fatalities
Strategies:
- Advance the work of the UC Davis Violence Research Prevention program to addresses the causes, nature and prevention of violence
- Advance the work of the UC Davis Pediatric Emergency Care Applied Research Network to conduct high priority multi-institutional research into the prevention and management of acute illnesses and injuries in children and youth of all ages

Objective G: Train current and prepare future health care professionals
Strategies:
- Maintain commitment to interdisciplinary professional and paraprofessional education
- Continue to provide Advanced Burn Life Support (ABLS) Provider Course to health professionals
- Work in partnership with regional K-12 and community colleges on health career outreach

Priority #2 – Cardiovascular Health
Objective A: Raise awareness among women and reduce the incidence of heart disease
Strategies:
- Target heart healthy education and prevention interventions among women in high risk groups and groups with greater knowledge disparity
- Partner with local nonprofit organizations to raise awareness of heart attack risk factors for women

Objective B: Raise awareness of the warning signs of stroke
Strategies:
- Provide enhanced community education and outreach on stroke prevention and warning signs in communities where health disparities and inequities exist
- Maintain primary stroke center certification
- Partner with community-based organizations and nonprofits to support activities focused on prevention

Objective C: Research and investigate the causes and treatments of heart and vascular disease and stroke
Strategies:
- Offer increased clinical trials to community members
- Advance the work of the UC Davis Center for Clinical and Translational Research

Objective D: Train current and prepare future health care professionals
Strategies:
- Maintain commitment to interdisciplinary professional and paraprofessional education
- Work in partnership with regional K-12 and community colleges on expanding opportunities for minorities to pursue careers in health care

Priority #3 – Chronic Disease Management and Care Coordination
Objective A: Invest in community-based nonprofits to enroll patients in health insurance and other programs
Strategies:
- Work with Sacramento Covered to educate, assist and enroll families in health insurance and other public benefit programs in Sacramento County.
- Strengthen collaborations with community-based organizations and other agencies that provide information on public benefit programs

Objective B: Help build primary care capacity and strengthen the safety net
Strategies:
- Continue to invest in establishment and expansion of Federally Qualified Health Centers (FQHCs) in Sacramento County by partnering with WellSpace Health and other nonprofit organizations to secure federal designations and adequate operational resources
- Continue to partner with WellSpace Health to fund and have resident physicians provide health care services for children and youth at the Oak Park center
- Partner with Kaiser Permanente on the new Accelerated Competency-based Education in Primary Care (ACE-PC) program for medical students to complete their degree in three years with an emphasis on primary care
- Actively participate in and contribute to Congresswoman Doris Matsui and Sierra Health Foundation’s Sacramento Regional Health Care Partnership

Objective C: Educate the community about respiratory diseases such as asthma and Chronic Obstructive Pulmonary Disease (COPD)
Strategies:
- Disseminate educational and resource materials, with a focus on women, to civic organizations, retirement communities and others about COPD
- Investigate collaborations with nonprofit organizations about offering asthma screenings in schools

Objective D: Provide culturally appropriate education to community members about diabetes
Strategies:
- Work with community based organizations to develop and distribute diabetes educational materials for underserved residents
- Partner with local K-12 schools to promote child health nutrition education programs

**Objective E**: Promote availability and access to healthy food choices

Strategies:
- Work in partnership with government entities, community-based organizations, food banks and neighborhood groups to promote access to safe, healthy food options
- Develop a Community Garden in partnership with the City of Sacramento
- Sponsor community events that promote activities which encourage physical fitness and exercise

**Objective F**: Research and investigate the causes and treatments of chronic disease and promote evidence-based, best practices in care coordination

Strategies:
- Develop program to outreach available clinical trials to community members
- Advance the work of the UC Davis Center for Reducing Health Disparities to research inequities in health access and quality of care
- Advance the work of the UC Davis Institute for Population Health Improvement to understand determinants of health and support activities which improve health equity and eliminate health disparities

**Objective G**: Train current and prepare future health care professionals

Strategies:
- Provide continuing medical education and other courses to local health professionals
- Work with K-12 schools and community colleges to encourage students to pursue careers in health care professions

**Priority #4 – Mental Health and Substance Abuse**

**Objective A**: Provide stable, sober housing to homeless, mentally ill and/or addicted persons upon discharge from the hospital through Interim Care Program (ICP)

Strategies:
- Work in partnership with WellSpace Health, Salvation Army, Sacramento County and not-for-profit health systems

**Objective B**: Provide mental health diagnostic and treatment for youth and young adults with psychotic disorders

Strategies:
- Advance the work of the UC Davis Early Psychosis Program that provides assessment, medication management, support groups, as well as education and employment and peer advocate support

**Objective C**: Research the mental health impact on racial/ethnic groups in order to provide culturally appropriate education and care

Strategies:
- Continue the work of the Center for Reducing Health Disparities and its work in researching mental health access and quality of care issues within Latino populations

**Objective D**: Train current and prepare future health care professionals
Strategies:

- Advance the work of the Integrated Medicine/Psychiatry Ambulatory Residency Training (IMPART) program that educates medical doctors to better recognize and addresses mental health issues, and also trains psychiatrists to practice better preventive medicine and improve care to improve health outcomes for all patient populations
- Support physician residencies in behavioral health

Issues Not Being Addressed and Why

UC Davis Medical Center responds to priority health needs in many ways. In addition to charity and uncompensated care, the medical center invests more than $500,000 annually in direct financial support of local nonprofit organizations that are uniquely qualified with specialized expertise to serve targeted populations. Of the four priority health needs identified in the CHNA, UC Davis Medical Center self-assessed its own capacity to serve the mental health and substance abuse needs of the broader community. While UC Davis Medical Center has some mental health programs in place, it was determined that this critical community need is better served by others. This is primarily due to the fact that UC Davis Medical Center is not licensed or certified as a locked psychiatric hospital, and the institution is not equipped to provide inpatient or outpatient substance abuse treatment. Accordingly, UC Davis Medical Center will continue to support strong partners in the community, such as WellSpace Health (FQHC), Salvation Army, Sacramento County and other community based organizations that provide mental health and substance abuse treatment.

Additional Investments That Address the Social Determinants of Health

The Association of American Medical Colleges found that social determinants of health account for more than 50 percent of premature disease and deaths in the United States. To combat the influences outside of the hospital environment, UC Davis Medical Center is actively working on several fronts to address behavioral and environmental health drivers. Such activities include:

- **Charity and Uncompensated Care** – For the Sacramento region’s uninsured and undocumented populations, UC Davis Medical Center provides 59 percent of the community’s indigent care at a cost of more than $135 million in unreimbursed care and more than $50 million in charity care in the 2011-12 fiscal year.

- **Community Financial Support** – The UC Davis Medical Center has a formal sponsorship process in place to accept, review and award funding to local nonprofit organizations that meet the institution’s criteria. In recent years, more than 200 organizations have benefited from the medical center’s commitment to the nonprofit sector, with more than $500,000 in direct financial support underwriting health and social service programs.

- **Culture, Ethnicity and Diversity** – The UC Davis Medical Center Medical Interpreting Services department provides assistance in 16 languages, including American Sign Language, as well as written translation in five languages. This dedication helps bridge the cultural divide for patients and families, offering culturally and linguistically appropriate translations of complex medical conditions and health care decisions.

- **Economic Development** – Individuals and families living above the federal poverty level is a key indicator of community health status. As an engine of prosperity fueling the economies of the Sacramento region and Northern California, UC Davis Medical Center generates thousands of jobs in the region. The organization plays a leadership role on the Sacramento Metro Chamber of Commerce, Asian Pacific Chamber of Commerce, Black Chamber of Commerce, Hispanic Chamber of Commerce, Rainbow Chamber of Commerce, Sacramento Area Commerce and Trade Organization, and Sacramento Area Regional Technology Alliance.
• **Education** – Educational attainment is key indicator of community health status. UC Davis Medical Center leads, partners and promotes a wide variety of educational programs, including residency programs and outreach to K-12 and college students.

• **Employee, Faculty and Student Engagement** – Employees participate annually in direct service to the community by donating time, goods and professional services to nonprofit organizations such as local food banks, foster youth programs, schools, shelters for the homeless and victims of domestic violence.

• **Research** – With more than 200 clinical trials underway, UC Davis Medical Center is actively exploring the underlying causes of disease and illness, including the socioeconomic factors that influence chronic conditions such as heart disease, diabetes and asthma. UC Davis Center for Reducing Health Disparities, UC Davis Institute for Population Health Improvement, UC Davis MIND Institute, UC Davis Comprehensive Cancer Center and UC Davis Institute for Regenerative Cures are all state and national leaders in research to help improve lives and transform health care.

**Next Steps**

As an academic medical center and research institution, the organization is fundamentally committed to evaluation of results. Continuous review of the CHNA implementation plan is a process that is active between the statutorily mandated three-year reporting periods. The implementation strategy is linked to the annual budget cycle, allowing for adaptation and course correction every 12 months. For each of the priority focus areas, UC Davis Medical Center will work closely with community partners to strengthen existing services and – where gaps exist – identify new collaborative initiatives to better serve targeted populations with priority health needs within defined communities of concern. As needed, internal committees and external advisory boards will be engaged in the implementation effort.