

**The U.C. Mobile Health Clinic Proposal:
A Low-Cost Solution to a High-Cost Problem**

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The Problem:

“Small infections on your foot might be able to be handled by just changing your socks, but when you [are not] able to wash in a bath or change your socks, they can actually lead to limb-threatening infections.” Walter Coppenrath, Kaiser Permanente Doctor, UCLA Mobile Clinic Volunteer.



The homeless population has multiple health needs because of their higher rates of mental illness, substance abuse, and vulnerable position on the streets which exposes them to unsafe conditions and often leads to risky sexual behaviors (Kushel, Perry, Clark, Moss, and Bangsberg, 2002). It is estimated that 40% of the homeless have some type of chronic health problem and 20 to 25% have some form of severe and persistent mental illness (Schanzer, Dominguez, Shrout & Caton, 2007; Morris & Gordon, 2006).

Simultaneously, they face significant barriers to health-care: lack of transportation, lack of access to a telephone, lack of health insurance, and information poverty leave them unaware of the medical services available to them or unable to access them (Kushel, et al, 2002). In addition, many homeless persons are wary of the government in general, making them reluctant to apply for public benefits (DiPietro, Knopf, Artiga & Arguello, 2012).

As a result of their lack of access to health-care, particularly basic preventative care services, the homeless populations turns to the Emergency Room (ER) for treatment. A study of homeless populations in San Francisco found that they are three times more likely to utilize the ER than the general population, a figure that both illustrates their lack of access to other non-emergency services, and dependency on the ER to meet their health-care needs (Kushel, et al, 2002). Similarly, a 1997 study of the L.A. homeless population found that only 57% of those surveyed had *any* contact with medical care, and of that number, 23% relied on the ER for regular medical treatment (Gallagher, Andersen, Koegel, & Gelberg, 1997). Researchers at San Francisco General Hospital found that 81% of frequent users of the hospital’s ER, those who had five or more visits in the previous 12 months, were homeless (Shumway, Boccellari, O’Brien & Okin, 2008). And these visits are costly.

Hospital ERs are one of the most expensive forms of care as each trip is about three times the cost of a regular doctor visit (Kushel, et al, 2002). Researchers analyzed the cost of the ten most common reasons for an ER visit, a sample consisting of 8,303 observations, representing 76.6 million ER visits, and found the median cost for these conditions to be \$1,233 (Caldwell, Srebotnjak, Wang, & Hsia, 2013). Since their goal was to produce an estimate of the cost of the most common ER conditions, rather than the most expensive, it is likely the actual figure is much higher.

Moreover, repeated use of the ER for primary care services creates a financial and organizational hardship for hospitals that is felt by the public. When the homeless rely on the ER as their primary source of health care, they force hospitals to pick up the tab, raising the cost of health care, and increasing wait times for everyone (Kushel, et al, 2002). A report by the Lewin

Group estimates that 80% of the ER visits by those struggling with homelessness were for conditions that could have been treated with primary care (Linkins, Byra & Chandler, 2008).

A San Diego study of 529 homeless alcoholics over a three year period (2000 to 2003) revealed the high price of health care for this population (Dunford, Castillo, Chan, Vilke, Jenson, Lindsay, 2006). Over the course of the three year study, the surveyed population required 3,318 trips to the ER, 652 hospital admissions, and 2,335 ambulance transportations, all of which cost a total of \$17.7 million.

As a state with one of the highest numbers of homeless persons in the nation, approximately 136,826 in total, or 22% of the nation's entire homeless population, California must find a more efficient health-care delivery system for the homeless to both reduce exorbitant costs and provide proper care of these individuals (Meghan, Alvaro & Morris, 2013, p. 12). Furthermore, researchers do not anticipate a decrease in California's homeless population in coming years given state data and have actually identified California as one of the states at risk for increasing homelessness (Sermons & Witte, 2011, p.37-38). Researchers examined five state factors for indications of future rates of homelessness-level of unemployment, home foreclosure, lack of insurance, high home cost and levels of "doubling up." One of the most common situations prior to homelessness is living with friends or family due to economic need, a term coined "doubling up" (Sermons & Witte, 2011, p. 37-38). California state data showed rates that exceeded the national average on all five indicators, suggesting the homeless population, and thus health-care costs, may continue to grow in coming years.

These costs are all the more pressing in light of reductions to disproportionate share hospital (DSH) payments under the recently implemented Affordable Care Act (ACA). The DSH program was designed to help safety-net hospitals responsible for providing care to uninsured and underinsured patients as well as Medi-Cal beneficiaries. Hospitals that serve these vulnerable patients by providing a federally designated level of uncompensated care are deemed disproportionate share hospitals and thus eligible to receive federal DSH payments to help offset their costs (Graves, 2012). The ACA will reduce DSH payments, meaning California hospitals will have less money to recoup the cost of caring for vulnerable patients like the homeless.

County hospitals in particular will face significant cuts to DSH payments as the ACA reaches full implementation over the next several years. California county hospitals are operated in 12 large counties in areas home to 65% of California's uninsured adult population (Graves, 2012). If hospitals continue to provide the same level of uncompensated care, but receive less DSH funds to cover the costs, uninsured hospitals trips like those made by the homeless will result in alarming losses in revenue.

The Solution:

In 2002, students at the University of California, Los Angeles (UCLA) recognized these barriers to health-care and came up with an innovative way to reduce the barriers to, and cost of, health-care for the homeless: mobile health clinics. The Mobile Clinic Project at UCLA serves as the basis for this policy innovation. Every week for the last 12 years, UCLA medical, law, and public health students work with volunteer doctors and social workers to deliver health-care as well as social services to the local homeless population. At the clinic, homeless persons have access to primary care services, HIV and STD testing, and even dental care.

Our aim is to expand the existing UCLA Mobile Clinic project to each of the five University of California medical schools to help alleviate this widespread problem throughout the State: the homeless populations' lack of access to health-care and the resulting costs incurred.

Mobile health clinics will deliver health-care services directly to a population largely unable to access them on their own, potentially saving California hospitals tens of millions of dollars in the process. While the primary mission of the UCLA mobile health clinics is to provide medical care and improve health outcomes, the clinic also provides on-site legal services, clothing, and referrals to local public services; volunteers connect the homeless population to existing infrastructures of care and thus help address a wide-range of needs and break down the many barriers to health-care.

Equally important, UCLA mobile clinic volunteers provide assistance in a welcoming, non-judgmental environment conducive to building the type of long-term relationships needed to help this population. As mentioned, the homeless populations' marginalized position in society and higher rate of mental illnesses often make them distrustful of public assistance. Overcoming the homeless population's distrust can be a lengthy process that requires a dedicated staff. Through small exchanges of clothing, food and support, the UCLA mobile health clinic has worked to establish a relationship with a population that generally shuns public outreach efforts.

Like the UCLA Project, each of the five U.C. mobile health clinics will be staffed by medical, law and public health students under the guidance of volunteer doctors and other staff, and provide comparable services. However, the U.C. Mobile Health Clinic Project will also work to enroll the homeless population in Medi-Cal, California's public health insurance program.

While the ACA will reduce DSH payments to safety-net hospitals, the legislation will also bring new opportunities to expand health-care coverage to millions of previously uninsured Americans by allowing states to expand their Medicaid programs to include more low-income adults and enhance certain benefits. Under the ACA, California will expand the Medi-Cal program, the State's version of Medicaid, to allow single adults without children with incomes up to 138% of the federal poverty level (FPL) to receive benefits. The federal government will cover 100% of the cost of services for these new enrollees through 2016 and no less than 90% thereafter (Tsai, et al., 2013). Not only will California expand the Medi-Cal program to provide services for more vulnerable residents, the program will now cover mental health services and free annual preventative exams, among other enhanced services. (Tsai, et al., 2013). Prior to the ACA, Medicaid benefits were limited to low-income individuals based on categorical eligibility, which required beneficiaries to fall within certain categories such as pregnant women or parents with dependent children. Many of those newly eligible for these services will be the homeless (Tsai, et al., 2013).

But eligibility for Medi-Cal services does not guarantee enrollment in the program or even the ability to access such services, especially for the homeless and the chronically homeless populations. As the name suggests, the chronically homeless are those who have been homeless for at least a year, or who have experienced 4 episodes of homelessness in the last 3 years, and have a mental or physical disability or substance abuse disorder. In other words, they are the homeless individuals with the greatest medical needs and equally high barriers to accessing care. In California, 28% of the homeless population is considered chronically homeless (Meghan & Morris, 2013).

"Sometimes we'll have cough drops available in the winter cold season or warm socks, as tools to kind of engage people and just do very minimal trust building at that moment to...get folks to talk to a health care provider." Julie, Homeless Outreach Worker, Chicago

On the eve of implementation of Medi-Cal expansion under the ACA, researchers have analyzed how to reach the homeless population that has traditionally shunned public outreach efforts yet needs public assistance the most. Given the homeless populations' distrust of public systems, lack of identification documents like a driver's license, and host of other barriers, researchers recommend targeted outreach efforts and direct assistance to help enroll the homeless population in Medi-Cal (Tsai, et al., 2013; DiPietro, et al., 2012). They note that overcoming these barriers will require gradually building relationships with the homeless population in order to build trust and provide one-on-one assistance through every step of the enrollment process (Tsai, et al., 2013; DiPietro, et al., 2012)

Thus, new federal funding to provide health-care to the homeless population will be available with the implementation of the ACA. However, what will still be lacking is one-on-one enrollment assistance and a delivery system to bring Medi-Cal services directly to the homeless population. U.C. mobile health clinics are uniquely equipped to provide assistance with enrollment as well as health-care services directly to the homeless, which will increase the effectiveness of the ACA.

To illustrate, a process as simple as applying for public assistance can be easily complicated by a lack of identification. A lack of stable contact information further complicates eligibility and enrollment as it prevents offices from following up with the homeless to notify them of the missing documents. Most documents like a social security card require another form of identification to replace the lost identification, which then creates a challenging cycle for homeless populations that lack the resources to gather such documents. But, these barriers are easily broken down by simple tasks like one-on-one assistance from a volunteer or by storing away critical identification documents in a mobile clinic. Below are strategies mobile health clinics will utilize to overcome Medicaid enrollment barriers.

Strategies to Overcome Medicaid Enrollment Barriers:

- Storing critical health information and identification documents
- Having staff dedicated to outreach, education and enrollment assistance
- Building community partnerships to assist with outreach and enrollment
- Providing direct assistance through every step of the enrollment process
- Providing contact clinic information as to serve as a secondary point of contact on the application form
- Helping individuals obtain required documentation

Implementation:

The U.C. Mobile Health Clinic project will create a coalition students and local community organizations to help deliver much needed health-care services to the homeless. Collaboration with community organizations will help ensure mobile health clinics can draw upon existing resources to deliver services, thereby lowering clinic costs and helping connect the homeless population to shelters and other assistance whenever needed. Since clinic outreach will focus on enrollment in Medi-Cal, the clinics will also potentially benefit from federal funds to attract and pay volunteer doctors, further helping staff and budget needs. The potential for federal ACA funds and grants, coupled with community partnerships and a volunteer clinic staff will make the clinics a financially attractive endeavor in a state with high health-care costs.

The proposed plan of action will draw from resources of four key stakeholder groups:

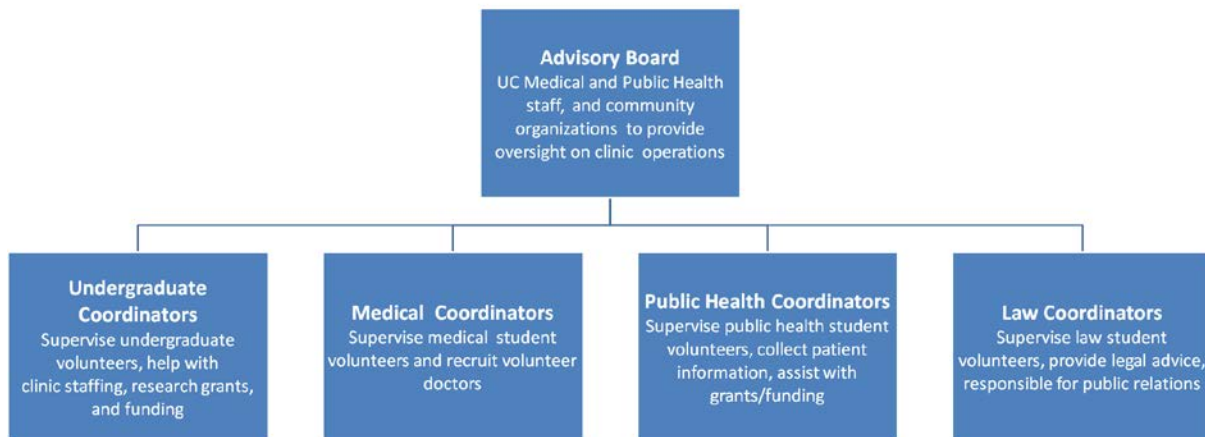
- U.S. Department of Health and Human Services,
- U.C. Medical School Campuses, (at Irvine, San Francisco, Davis, Riverside, San Diego)
- County health departments, (Orange, San Francisco, Yolo, Riverside and San Diego)
- Homeless Advocacy, Resource Groups and Programs

U.S. Department of Health and Human Services (HHS)

The U.S. Department of Health and Human Services is responsible for the administration of health programs at the federal level throughout the United States, including the recently passed ACA. The ACA has allocated a number of grants to help facilitate Medicaid outreach and enrollment efforts. In particular, through the ACA's Capital Development funding, U.C. campuses, as public and state controlled institutions of higher education, are eligible to apply for any of the 150 individual grants up to \$250,000 (acf.hhs.gov).

U.C. Programs

U.C. campuses will serve as the foundation of the U.C. Mobile Health Clinic Project. U.C. medical students as well as students from undergraduate and graduate programs in public health, social work, law and psychology will be eligible to volunteer as staff members of the mobile health clinics. These students will work in collaborative teams under the direction of volunteer doctors, social workers, lawyers and public health professionals to help coordinate care and clinic operations. Clinic operations will range from compiling patient data to researching grants to assisting physicians, etc. In working with the clinics, students can gain valuable skills and experience while gaining academic credit and clinical hours. Below is a layout of how the individual mobile clinics will be organized and operated:



As the UCLA mobile clinic has done, undergraduate students can select the mobile health clinic as a non-profit service project for academic credit, allowing them to earn 12 academic units for volunteer work completed at the clinic over the course of a year. Academic credit for

volunteer service work is allowed under U.C. civic engagement programs and helps ensure mobile health clinics will be staffed year- round.

U.C. medical, social work, clinical psychology and public health schools, like other certified programs, already uses students to staff U.C. affiliated hospitals and clinics in their local communities so students can fulfill the clinical hour rotation requirements of their programs. The clinical hours requirement varies from 250 hours to 3 years, depending on the program. The incorporation of the mobile health clinic into the clinical hours rotation of the professional students will also help provide year-round staffing for the clinics.

County Health Programs

The counties in which the proposed U.C mobile health clinics are located all have pre-ACA low-income health service programs, but have faced funding shortfalls when it comes to expanding services to undocumented and homeless populations. For instance, in smaller communities like Davis and Irvine, low-income health service programs are often underfunded because they are financially linked to other overused programs. Mobile health clinics will collaborate with these county based low-income health service programs to expand services to the homeless, an objective that is well-aligned with the organizational goals of both groups and appealing to county programs with limited financial resources.

Homeless Advocacy, Resource Groups and Programs

Homeless programs like the publicly funded service organizations have struggled with providing adequate legal, physical and mental health services to the target populations. Groups such as the Coalition on Homelessness, in San Francisco and the Yolo Homeless Poverty and Action Committee in Davis, California have focused on expanding access to services for the homeless population. These groups will likely view a partnership with the mobile health clinics as a valuable opportunity to expand resources and outreach efforts.

Trade-offs:

With any policy implementation, there are positive and negative trade-offs, financially, and politically.

Positive Impacts and Tradeoffs:

- Reduced emergency health-care costs (homeless ER visits, hospitalizations)
- Increased enrollment in free and affordable health-care programs for homeless populations
- Increased contact between the homeless and health-care providers, potentially helping homeless move beyond a life on the streets

Negative Impacts and Tradeoffs

Many homeless advocacy groups have refused to accept government funding for fear of losing control over the policy directions of their organizations. Government funding in this community is seen as a vehicle to silence the activism and hard-line policy changes sought by leading advocacy groups. The acceptance of government grants, subsidies, etc. also requires

documentation of client lists, social security numbers, etc. which many indigent homeless are resistant to disclose.

Included in the tradeoffs are the financial costs that in the current political and economic climate are pitting poor populations against one another for limited resources. It is argued that funding for mobile health clinics can be applied to offset other program shortfalls that serve foster children, single parents or the working poor such as housing and other urban development projects.

Benefits:

While Mobile Health Clinics have an obvious appeal in terms of helping the less fortunate and promoting public health, they are also a smart financial investment and an effective method of reducing health-care costs. After reviewing research and analysis of pre-existing mobile health clinics, it is clear that the costs of such programs are greatly outweighed by the benefits, both in terms of dollars and quality of life.

The Mobile Health Clinics Network (MHCN), a national trade association including over 330 organizations, has developed a method for measuring Return on Investment (ROI) for mobile health clinics. This provides quantitative data that communicates in a clear and concise manner the benefit of these clinics. MHCN's formula for calculating the ROI for mobile health clinics is (Lynch, 2011):

$$\frac{(\textit{Emergency Room Costs avoided} + \textit{Quality-Adjusted Life Years saved})}{\textit{Total cost of mobile health clinics}}$$

Quality-Adjusted Life years (QALY) measures the burden of an illness, taking into account both the quality and the quantity of life lived given an illness a person is suffering from, or lack thereof. QALYs are used in order to assign a dollar value to how much a person's life is improved by an intervention. To quantify this benefit, QALY measures the number of years added to a person's life as a result of an intervention. Every year in perfect health is assigned the value of 1.0, and this number drops as an individual's health reaches further and further away from perfect health until it reaches a value of 0.0 representing death.

MCHN members across the country have calculated the ROIs of their mobile clinics, finding that they range from four to forty (Lynch, 2011). This means, that for every dollar spent on running a mobile health clinic, the clinic earns back anywhere from four to forty dollars as a result of the services it provides. Another cost-benefit analysis of Mobile Health Clinics examined The Family Van which is sponsored by Harvard Medical School and serves "medically disenfranchised" individuals in Boston. This report found that the ROI of the The Family Van was 36 to 1, a incredibly high rate of return (Oriol et al., 2009).

Below is an example of the breakdown of the costs and benefits of operating a mobile health clinic, using the John Muir Health Community Clinic that operates in Contra Costa County California:

ER Costs Avoided				
Total Visits Counted for ER Avoidance	687			
Annual Mobile Health Clinic Costs	\$374,918			
Average Costs per Visit	\$112			
Costs of Preventable ED Visit	\$825			
Estimated ER Costs Avoided	489,533			
QALYs				
	Services Delivered	Avg QALYs Saved Per Person	Total Number QALYs Saved	Estimated Value of QALYs Saved
Asthma and Acute Respiratory	129	0.04	5.16	\$361,200
Diabetes	156	0.04	6.24	\$436,800
Hypertension	249	0.04	9.96	\$697,200
Chronic Illness	67	0.04	2.68	\$187,600
Urget	53	0.04	2.12	\$148,400
Abdominal Pain	20	0.002	0.04	\$2,800
Cellulitis	13	0.002	0.026	\$1,820
Total	687		26.226	\$1,835,820
Return on Investment				6.20

Our proposed mobile health clinic has the added benefit of training students (expanded upon below). By partnering with U.C.s, and subsequently relying on medical, public health, and law students to operate the clinics, the mobile clinics provide training to these students that they can take with them an apply in their future careers.

These high returns on investment highlight the low cost of preventative care, compared to the cost of ER visits and full-fledged sickness, a concept that is at the heart of our proposal. A mobile health clinic is in a unique position to not only provide health-care to disadvantaged groups, but in doing so increases regular preventative care which in turn reduces financial costs of healthcare by decreasing reliance on ER visits.

Trains Future Students

Mobile health clinics have benefits far beyond cost-savings- they help train students for their future professions while simultaneously filling in a gap in the health-care system. Many of the UCLA students involved in the mobile health clinic report their experiences at the clinic as rewarding, and the exposure to disadvantaged populations helps them build empathy. As one UCLA mobile clinic volunteer explains, “I feel like the clinic has taught me ways to bring multiple components together to be able to link patients with the social and the health resources that they need to help improve their lives and to also improve their health. And most of all, I think I will take with me and carry with me the collaborative spirit that helps the clinic thrive, where everyone plays a part in making it a success every week.”

Creates Community Partnerships

Mobile clinics will bring together U.C. medical schools and their local communities, creating community partnerships, so together, they can help more of California’s most vulnerable while strengthening ties between the U.C. school system and stakeholders. Community

partnerships will ensure cost-effective implementation of the U.C. Mobile Health Clinic project and reinforce U.C. campuses as public institutions dedicated to addressing pressing social issues in their communities.

Political Feasibility:

While we have already demonstrated the ways in which U.C. mobile health clinics provide a cost-effective and compassionate solution to the unavailability of sufficient health-care to the homeless, we must also address if mobile health clinics are a politically feasible option.

The ACA is still struggling to be fully implemented for various reasons, primarily, the strong opposition from certain political factions, such as Tea Party members and staunch Republicans, as well as complications with the federal and state health-care exchange websites (Rampton, 2013). Given the generally negative public opinion surrounding the ACA, it could be difficult to generate enough public support to implement the mobile health clinics successfully. Many Americans hold unfavorable views of the ACA and may oppose mobile health clinics simply on the basis of their association with the legislation.

The public's strong opposition to the ACA could lead to a mobilization of interests groups or individuals working to prevent the homeless from enrolling in Medi-Cal, either because of ideological beliefs or in an attempt to push the ACA towards failure. Fortunately, implementation of the U.C. Mobile Health Clinic project does not hinge on government or widespread public approval as no part of the program requires changes to existing law or policy.

Rather, the U.C. mobile health clinics connect individuals to benefits already prescribed to them under the ACA. Ultimately, because these mobile health clinics are funded through policies already passed, and they rely primarily on volunteers for operation, there is little opportunity for opponents to stand in the way of implementing this program

Political feasibility must also be discussed in terms of the target population of this program: the homeless. Opinions on the homeless vary according to political ideology, age, and gender. A 2001 study of attitudes towards the homeless found that women, younger groups, and liberals tend to have more compassionate views of the homeless, while males, older populations, and conservatives tend to have a less favorable view of the homeless (Tompsett 2001). Considering California is a predominantly democratic state, its political climate can be expected to be receptive to mobile health clinics. Furthermore, the U.C. mobile health clinics will rely heavily on student volunteers who are more likely to be receptive to such an endeavor, as students are typically younger individuals.

However, because these mobile health clinics will be operated and carried out on a local level, the political ideology of the areas surrounding each U.C. should be taken into consideration. For example, U.C. Irvine is located in the middle of Orange County, which is a notoriously conservative county. While the demographics of Orange County are rapidly changing to include more diverse, albeit segregated, populations, U.C. Irvine, in implementing this program, would be wise to emphasize the financial benefits and health-care savings posed by the mobile health clinics. Careful framing of the program in cost-benefit terms could appeal to fiscal conservatives and help shift focus away from the unpopular ACA. U.C. Irvine could also focus on building meaningful partnerships with popular or well established local organizations in order to maintain a large base of support.

Despite these potential challenges, given that this project does not require changes to existing policy, is being implemented in a democratic state by mostly younger volunteers, and there is a substantial amount of evidence to attest to the high rate of return on mobile health

clinics, our proposal is politically feasible. Furthermore, the existence and success of the UCLA, and other California based, mobile health clinics give us further confidence in the feasibility of our project.

Conclusion:

The U.C. Mobile Health Clinic project will provide an innovative solution to a pressing social problem at a time when profound changes to the health-care system create a unique opportunity for mobile clinics to receive federal health-care funding. The project is a cost-effective solution for California, a compassionate approach to helping the homeless, and a valuable training opportunity for the next generation of doctors and public health professionals. For these reasons, we feel our policy proposal is a critical step forward towards improving and expanding health-care in the United States.

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