How Do We Get There?: The Impact of Barriers to Health Care Access for Vulnerable Populations

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BACKGROUND AND SCOPE

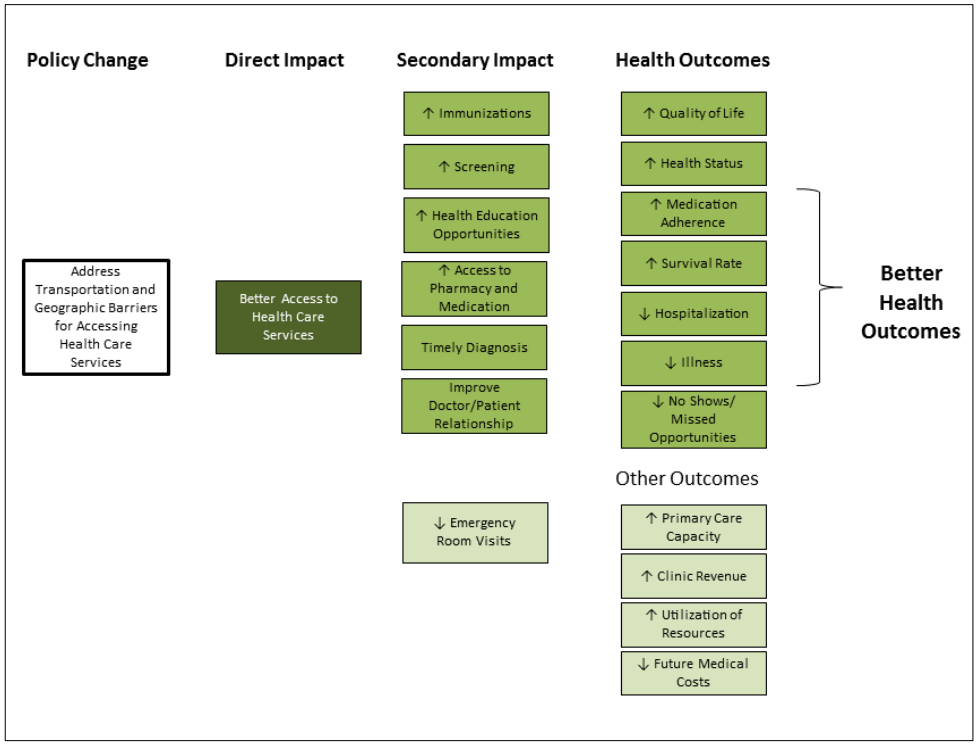
Land use and transportation planning are integral elements to providing equitable health care access. Access to health care services is associated with better overall health, higher use of preventative health services, lower rates of preventable hospitalizations, and overall health care costs. Lack of transportation is cited as a leading barrier to access, and disproportionately burdens the poor, people of color, and those with disabilities. Addressing and removing transportation and geographic barriers can improve access to health services, improve health outcomes, and reduce health disparities.

The Potrero Hill Health Center (PHHC), a safety-net clinic in San Francisco, was initially built to serve the nearby public housing developments, and now serves patients from across the city. Today, patients face multiple barriers in accessing health care services, which can significantly impact their health. These barriers include geographic and transportation factors such as the steep terrain surrounding the clinic, bus line re-routing and stop changes in 2009 to optimize the bus route for the entire area, and the time and distance patients must travel to visit the clinic.

This assessment sought to better understand the transportation and geographic barriers PHHC patients face, how these barriers affect their access to health care services, and what their potential health impacts are.

Transportation and Health Care Access in the United States

Every year, approximately 3.6 million Americans miss at least one medical appointment because of transportation issues, and on average, those patients are disproportionately poorer, older, people of color, female, and people with chronic illnesses and/or disabilities [1].



Pathway Diagram: Health Impacts from Transportation and Geographic Barriers to Health Care Access

Transportation-related barriers may lead to missed medical appointments, delayed care and delayed medication use [1-3]. These outcomes can compromise patient care, exacerbate diseases and poorer chronic illness management, resulting in increased use of the emergency room, specialist visits, and hospitalization. Missed appointments also lead to poor resource use, increased staff workloads, lower staff productivity and increased medical costs [1-4]. The figure on the left details how addressing transportation and geographic barriers to health care services can benefit health.

Potrero Hill Health Center Background

Constructed in the 1970's, PHHC was designated to provide primary care services to residents of the large public housing developments nearby, Potrero Hill Terrace and the Potrero Hill Annex. Currently, PHHC's patient population is drawn from across the city, but the patient demographic profile mirrors that of the local housing development, with 40% African Americans, 35% Spanish-speaking, and a minority Asian and Caucasian. Approximately 80% of PHHC patients are covered under Medi-Cal (California's version of Medicaid) and/or Medicare, 15% under Healthy San Francisco as they are not eligible for the Affordable Care Act, and 6% are uninsured.

The street grades surrounding the clinic in all directions are significant for pedestrians. Grades on walking routes to the clinic from transit stops as well as nearby housing well exceed the United States Access Board's guidelines of a 5% preferred grade for pedestrians, with grades up to 9% [5-6]. SFMTA generally considers 8% grades and lower to be appropriate for accessible stops for purposes of deploying a bus lift, with stop spacing standards using 10% grades as the breaking point for more frequent stops.

METHODS AND FINDINGS

We examined transit and geographic conditions and transportation behaviors to better understand how they affect PHHC patient access to health care services. The examination included a mapping analysis of estimated transit travel times from home addresses for current PHHC patients using Google Maps, and an analysis of survey data describing patient characteristics and their experience with transportation access to PHHC and other health care services. The following is a summary of the findings.

Patient Conditions and Physical Mobility

PHHC patients experience numerous health conditions and mobility issues that make accessing the clinic difficult. Despite being approximately 200 feet from the nearest transit stop, patients are physically unable to face the steep hill. San Francisco Department of Public Health (SFDPH) data indicates that PHHC patients are disproportionately burdened with acute and chronic health conditions; its hospitalization rate is among the highest when compared to other SFDPH clinic populations[i].

Also, based on a 2014 patient survey[ii]:

- Over 30% of PHHC patients state they cannot comfortably walk more than a block on a steep hill.
- 85% of patients report having at least one symptom impacting their ability to walk (back pain, shortness of breath, pain in legs or feet, dizziness, balance problems, chest pain, pregnancy, etc.).
- 26% of patients report using at least one assistive device (cane, walker, wheelchair, white cane, crutches, braces).

"…I missed the 48 and realized that if I tried to wait for the next one, I would be late from my appointment so I had to walk the whole way… I had foot pain walking up the hill … I even walked in the middle of the street to make it easier because it's not as steep…"

Senior woman seeing the podiatrist for a painful cyst on

Transit Conditions to Clinic and Allied Health Services

In California Code of Regulations, each health plan shall ensure that primary health care services are no more than 30 minute travel time or ten miles travel distance from each member's place of residence [7]. Applying this guideline to health care services in San Francisco, all primary care services are located within a ten mile travel radius of where residents live; however, based on a mapping analysis[iii] and the 2014 patient survey, patients struggle to reach health care services in less than 30 minutes:

[i] Data Source: SFGH Data Center, 2016

[ii] Survey was administered in 2014 via telephone to random sample of PHHC patients and had a 22% completion rate (n=65). Patients were contacted three times to participate and offered a small incentive. The survey was administered in English and Spanish and had an average completion time of 10-20 minutes.

[iii] Mapping analysis used client residence data for 2,991 unique patient addresses, representing patients seen at the clinic at least once over a 6-month period.

- If taking the estimated fastest transit route from their home address**, 40% of estimated patient trips to the clinic via transit would** take an estimated 30 minutes or more.

Based on the 2014 patient surveys:

- **58% of patients report clinic travel times of** 30 minutes or more to access the clinic.
- 40% of patients report travelling 30 minutes or longer to access Zuckerberg SF General Hospital Services, where they receive health care services not available at PHHC (e.g. radiology)
- 39% of patients report pharmacy travel times that exceed 30 minutes or more to access their pharmacy.
- 49% of patients report being late, missing an appointment, delaying or going without health services because of public transportation problems. Among patients who ride Muni, 58% report being late, missing an appointment, delaying or going without health services. Among **patients who ride Muni and use assistive devices, 73% report being late, missing an appointment, delaying or going without health care**.
- 60% of patients who use Muni find it difficult to get from their last Muni stop to the clinic.

"We have had many cases where patients have developed chest pain specifically precipitated by trying to climb the incline to get to clinic, requiring transport of the patient to the hospital by ambulance. We have also had several cases recently of patients dropped off by the bus who were too sick to make it to the clinic, requiring bystanders to run to the clinic for assistance."

Dr. Jan Gurley, PHHC Clinician

Equity

Barriers to health care access are not evenly distributed among patients and **disproportionately burden the poor, people of color, and people with disabilities.**

Based on the 2014 patient surveys:

- PHHC patients with lower-incomes (reported annual household incomes of less than $50,000), who are more likely to have mobility issues, report more barriers to accessing the clinic (e.g. difficulty in walking).
- Low income patients are more likely to report relying on Muni to reach the clinic and are more likely to cite public transportation as a barrier, causing them to miss appointments, delay care, arrive late to an appointment, or go without health services compared to patients at other income levels.

Improving Access

Based on the 2014 patient surveys:

- 66% of patients report that their access to health care would be improved if their clinic or healthcare facility was located closer to their home.
- Among patients who ride Muni to the clinic, 68% report that their access would improve with a closer bus stop to the clinic.

POLICY OPPORTUNITIES AND RECOMMENDATIONS

The above findings illustrate that PHHC patients face multiple barriers to accessing health care due to transportation and geographic conditions. These barriers have significant health impacts and disproportionately burden the poor, people of color, and people with disabilities. The following policy opportunities and recommendations to improve access to health care services for PHHC patients and other safety net clinics should be considered.

1. Paratransit and Other Innovative Transportation Solutions

- **SF Paratransit and SF Taxi:** Increase SF Paratransit and SF Taxi service utilization by PHHC patients. Based on the 2014 survey, while 85% of survey respondents report having one symptom impacting their ability to walk, only 6% of survey participants report typically relying on Paratransit to reach the clinic.
- **Innovative Use of Rideshare Services:** Explore partnering with rideshare companies to help fill gaps in public transit services. This approach should target the lowest income residents who are experiencing the highest rates of physical mobility limitations and are the most dependent on public transit.

2. Health Care Access

- Assess how medical home and pharmacy assignment processes could better address transportation needs of patients. Patients may choose a clinic with less accessibility due to privacy, existing relationships with doctors and/or other personal reasons and San Francisco Health Network could partner with health plans to consider travel time in new patient assignment processes and to assist patients in transferring to clinics that are more easily reached by public transportation.
- Integrate transportation access and service eligibility questions (e.g. SF Paratransit) into patient intake processes, and use data to connect patients with needed services.

3. Interagency Collaboration: Coordinating to Address Equity and Health

Opportunities exist for the SFDPH and SF Municipal Transportation Agency (SFMTA) to increase their coordination on equity and health considerations in transportation and land use planning. Increased inter-agency collaboration could provide opportunities to proactively assess and address the impacts planning and policy decisions have on access to health care services, especially among San Francisco's most vulnerable residents.

- The following could provide opportunities for collaboration:
  - *Muni Equity Service Policy-The Muni Equity Strategy:* SFMTA's Muni Equity Service Policy calls for a biennial Service Equity Strategy to be developed in concurrence with SFMTA budget processes. This strategic planning process could provide opportunities to identify specific health care sites for inclusion in SFMTA's access analysis and to proactively assess the impact of SFMTA transit planning and policy decisions on safety-net clinic patients and other vulnerable populations.
  - The *Health Care Services Master Plan:* This strategic planning process identifies current and projected needs for health care services within San Francisco and provides recommendations on how to achieve and maintain appropriate distribution of and equitable access to health care services. Transportation is highlighted as an important barrier to accessing health care and further efforts could be made to strategize on how to overcome these barriers.
  - The *HOPE SF Potrero Hill Rebuild:* The Potrero Terrace and Annex public housing site, which is adjacent to PHHC, is slated to be rebuilt as part of HOPE SF. The transportation resources planned as a part of the redevelopment could potentially be leveraged to meet the transit needs of clinic patients – many of whom also live on the very hilly site where the housing is located.
- SFDPH and SFMTA could coordinate on emerging funding opportunities, such as the FTA's Ride to Wellness initiative, which aims to improve transit access to health care services [9].
- Transportation issues facing PHHC patients may also affect patient populations of other San Francisco safety-net clinics and could benefit from additional examination.

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