Mobile Health Clinics: Improving Access to Care for the Underserved

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Introduction and Purpose

This brief provides best practice models for employing a mobile clinic to improve access to care for vulnerable populations, including detail on:

- National mobile health clinic trends
- Profiles of successful mobile health clinics with an emphasis on operational considerations such as staffing and funding
- Action steps for developing a program
Background: Defining the Mobile Clinic Market
Systemic Barriers Restrict Access to Care for Already-Vulnerable Populations

Lack of Consistent Care Drives High-Cost Emergency Department Visits and Hospitalizations

Most Frequently Cited Barriers to Health Care Utilization

- **Distrust of the Health Care System**
  - 53%
  - Low-income Americans who agreed that U.S. doctors cannot be trusted

- **High Cost of Care**
  - 20%
  - Uninsured patients who went without needed care due to cost; 8% for publicly insured patients

- **Lack of Transportation**
  - 25%
  - Low-income patients who have missed or rescheduled appointments due to lack of transportation

- **Lack of Insurance Coverage**
  - 11%
  - Noneelderly uninsured rate

Nonelderly Patients Without Usual Source of Health Care by Insurance Type

*Kaiser Family Foundation* 2015

- Uninsured: 54%
- Medicaid or Other Public: 13%
- Employer or Other Private: 12%

More than half of uninsured nonelderly patients lack a usual source of health care

Other Common Barriers:

**Individual**
- Race, ethnicity
- Gender, sexual orientation
- Age
- Socioeconomic status
- Legal status
- Employment status

**Interpersonal**
- Linguistic and cultural barriers
- Personal safety
- Psychological barriers
- Intimidation by health care settings
- Anonymity concerns

**Systemic**
- Location, hours of operation
- Health care provider shortages
- Food insecurity
- Literacy, education
- Housing quality

Mobile Health Clinics Costly but Effective Method for Reaching the Underserved

Most Common Offerings Include Preventive Screenings, Primary Care, and Dental Services

**Purpose of Mobile Health Clinics**
To provide accessible health care services for vulnerable populations by reducing traditional barriers to access (e.g., transportation, time constraints, distrust of health care system)

**National Trends Identified by Harvard’s Mobile Health Map**
Services: preventive screenings, primary care, and dental services are most common; others include disease management, behavioral health care, prenatal care

Target populations: primarily the uninsured and publically insured, as well as children under 18; of patients currently served by mobile clinics, 60% are uninsured, 31% are publically insured, and 9% are privately insured; 42% are under age 18

Locations: both rural and urban communities with 39% serving cities, 14% serving rural areas, and 47% serving both

**Mobile Health Clinic Patients’ Insurance Coverage**
Survey by Harvard Medical School’s Mobile Health Map

- Privately Insured: 9%
- Publically Insured: 31%
- Uninsured: 60%

**Mobile Health Clinic Patients’ Insurance Coverage**
Survey by Harvard Medical School’s Mobile Health Map

- Most Common Services Offered by Mobile Health Clinics
  - Preventive Screenings: 45%
  - Primary Care: 42%
  - Dental Services: 30%

**Mobile Health Clinic Patients’ Insurance Coverage**
Survey by Harvard Medical School’s Mobile Health Map

- Estimated mobile health clinic visits annually: 6.5M
- Average operational cost of a mobile program per year: $429K
- Average return for every dollar invested in mobile health: $12
Analyze Non-Clinical, Clinical, Utilization Trends to Inform Mobile Intervention
Supplement Data Analytics with Community Input to Fulfill Demonstrated Need in Market

### Trends Suggesting Opportunity for Mobile Health Clinic Intervention:

**Non-Clinical Signals**
- Presence of logistical barriers to health care (e.g., transportation access, insurance)
- Shortage of dental, behavioral health, specialty, or primary care providers in community
- Patients disconnected from health care system (e.g., lack of primary care visits)
- Distrust between population and providers
- Community resource utilization (e.g., housing services, SNAP benefits)

**Clinical Signals to Further Segment by Patient Populations (e.g., payer type, location, disease state)**
- Repeat symptoms presented in the emergency department (e.g., asthma attacks)
- High chronic disease prevalence (e.g., diabetes, asthma)

**Utilization Signals**
- High hospital readmission rates
- Low outpatient visit rates
- High inpatient costs
- High emergency department utilization and costs

### Sources to Determine Population Needs:

- Discussions or survey of community-based organizations, residents
- Community Health Needs Assessment
- Public transportation scheduled routes
- **County-level insurance rates**
- Hospital claims data
- **Centers for Disease Control and Prevention** data and statistics (e.g., diabetes, oral health)
- **Demographic Profiler Tool**
- **Avoidable Emergency Department Tool**

Learn from Your Peers: Innovative Mobile Health Clinic Models
## Profiled Organizations’ Mobile Clinic Strategies Rooted in Population Needs

<table>
<thead>
<tr>
<th>Goal</th>
<th>Profiled Organization</th>
<th>Target Population</th>
<th>Service Offerings</th>
<th>Staffing Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increase Trust</td>
<td>Harvard Medical School’s The Family Van</td>
<td>Uninsured or underinsured patients in the Greater Boston area</td>
<td>Preventive screenings, health education, referrals to social services and community health centers</td>
<td>Health educator, dietician, HIV tester and counselor, assistant director, 2-3 volunteers, rotating collaborators from community-based organizations</td>
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<tr>
<td></td>
<td>Holtz Children’s Hospital’s Pediatric Mobile Clinic</td>
<td>Uninsured children in Miami, Florida, up to 21 years of age, many of whom are immigrants with legal needs</td>
<td>Clinical care (e.g., physicals, immunizations, screenings, chronic illness management, behavioral health support, urgent care), legal aid and social services</td>
<td>5 clinical staff (part-time pediatrician, psychologist, NPs, MAs), social worker, 5 administrative staff, volunteer law students</td>
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<td>Circle Health Services’ Syringe Exchange Program</td>
<td>Intravenous drugs users in Cleveland, Ohio, who are at risk for contracting or spreading HIV and Hepatitis C</td>
<td>One-for-one syringe exchange, rapid HIV and Hepatitis C screenings, flu vaccinations, health education, provision of free harm reduction kits</td>
<td>2 outreach workers, 2 volunteers per trip, 1 part-time RN</td>
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<tr>
<td>Remove Logistical Barriers</td>
<td>Parkland Hospital’s HOMES Program</td>
<td>Homeless adults and youth in Dallas County, Texas</td>
<td>Medical, dental, and behavioral health care; pharmaceutical assistance</td>
<td>RN, driver, physician or advanced practice provider (e.g., MD, PA, NP)</td>
</tr>
<tr>
<td>Fill Service Gap</td>
<td>Mobile Care Chicago</td>
<td>Children in Chicago, Illinois, without access to asthma specialty care</td>
<td>Medical and preventive care, education, support</td>
<td>2 NPs, 2 MAs, clinic technician; additional support from CHWs who help identify patients and conduct home visits</td>
</tr>
<tr>
<td></td>
<td>The Health Wagon</td>
<td>Uninsured or underinsured rural population in Southwestern Virginia</td>
<td>Primary, preventive, dental, behavioral health, telehealth, and specialty care; pharmaceutical assistance and aid</td>
<td>Nurse-led clinical team (DNP, RNs, LPNs, NP), volunteer specialists from state academic institutions</td>
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Source: Population Health Advisor interviews and analysis.
Successful Programs Start with a Clear, Population-Specific Vision

Identify Structural Barriers that Contribute to Health Disparities

### Three Common Goals to Guide Service Deployment

<table>
<thead>
<tr>
<th>Identify Purpose</th>
<th>Increase Patient Trust</th>
<th>Remove Logistical Barriers to Care</th>
<th>Fill Service Gap in Community</th>
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<tbody>
<tr>
<td><strong>Serve as a comfortable entry point to the health system for patients who may be disengaged or distrustful of the health care system</strong></td>
<td><strong>Bring care to consumers where they are to reduce burden of logistical barriers (e.g., work hours, lack of transportation)</strong></td>
<td><strong>Target highly prevalent conditions or service lines for which there is insufficient access</strong></td>
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### Track Metrics that Assess Progress

- Identification of undiagnosed chronic conditions
- Number of referrals to primary care or specialty care services
- Patients’ sense of community and social connectedness
- Frequency of service interaction (e.g., number of visits)
- New clients served
- No-show appointments as a percentage of total scheduled appointments or sessions
- Emergency department utilization and hospitalization for target condition
- Frequency of acute episodes
- Average time to receive referral to specialist

Source: Population Health Advisor interviews and analysis.
1. Increase Patient Trust

Van Serves as Critical Community Access Point to Full Continuum of Care
Focus on Prevention Preserves Role of Existing Provider Organizations in Offering Primary, Specialty Care

The Family Van Functions as “Knowledgeable Neighbor” to Connect Patients to High-Priority Services

The Family Van
- Focus: entry point to engage vulnerable populations
- Services: preventive screenings (e.g., blood pressure, blood glucose), education, referrals to CHCs and social services (e.g., food pantries, legal services) to address patients’ highest needs
- Staff: health educator, registered dietician, HIV tester and counselor, assistant director, 2-3 volunteers, rotating collaborators (e.g., breastfeeding educator)
- Patient engagement: serve as “knowledgeable neighbor”
  - Staff speak languages common in community and are trained in cultural sensitivity
  - Patients prioritize what they’d like support with
  - Community input determines service offerings

Community Health Centers
- Provide traditional primary care services
- Often refer patients back to The Family Van for ongoing education and care between visits

Community-Based Organizations
- Address non-clinical and specialty needs identified by The Family Van
- Help patients overcome barriers (e.g., food insecurity, housing and employment needs)

Harvard Medical School’s The Family Van
- Mobile clinic run by Harvard Medical School that travels to vulnerable neighborhoods in Boston, MA
- Services include preventive screenings, health education, and referrals to social services. The program has also developed deep, reciprocal relationships with local CHCs and community-based organizations who provide other clinical, non-clinical services
- To overcome distrust of health care system, leverage reputation as “knowledgeable neighbor” to engage community members, ensure that services provided are those identified as being highest need by patients themselves, and rely on rotating collaborators from partner organizations address specific needs of community (e.g., STD education and breastfeeding instruction)
- Approximately one-third of patients visit the mobile clinic two or more times in a year and one-third were referred by family or a friend

Source: Population Health Advisor interviews and analysis.

- Saved for every dollar invested in The Family Van
  $21
- Patients referred to follow-up health or social services in FY2015
  25%
- Patients who learned they had a previously undiagnosed illness (e.g., diabetes, glaucoma)
  12%
Partnership Pairs Clinical and Legal Support for Children and Families

Cultural Competency Efforts Integrated into Staffing, Marketing, and Service Delivery to Build Trust

Social Worker Serves as Liaison Connecting Patients to Legal Support

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<tr>
<th>Children with only clinical needs</th>
<th>Children with legal needs</th>
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**Services**

**Clinical Care**
*Pediatric Mobile Clinic (PMC)*
- Offers physicals, immunizations, screenings, chronic illness management, behavioral health support, urgent care, referrals
- Hiring priority given to staff who are proficient in patients’ first languages; partner with ethnic community groups (e.g., Center for Haitian Studies)

**Supplemental Social Services**
*Social Worker Liaison*
- Connects patients with legal support, assists with Medicaid enrollment; handles 75-80% of legal issues and refers more complex cases to HRC
- Bilingual to meet needs of Spanish-speaking patients

**Legal Services**
*Health Rights Clinic (HRC)*
- Provides free legal aid to PMC patients; cases typically relate to immigration, special education placements, public benefits
- Brands law student volunteers as University of Miami staff to build on trusted relationship

**Cultural competency efforts**

**Case in Brief: Holtz Children’s Hospital’s Pediatric Mobile Clinic**
- 126-bed children’s hospital located at the University of Miami/Jackson Memorial Medical Center in Miami, Florida; part of Jackson Health System
- Mobile clinic provides clinical care, preventive services, and social support to uninsured children up to 21 years of age; serves large immigrant population
- Developed partnership with the University of Miami School of Law’s Health Rights Clinic to pair free medical care with pro-bono legal services that target issues related to immigration, public benefits, and special education placements
- Staff refer at-risk patients to social worker liaison, who triages cases to the HRC; 75-80% of cases can be handled by social worker without HRC
- Serve approximately 2,400 patients annually through more than 600 behavioral health encounters, 1,000 social services, and 3,000 immunizations

Source: Population Health Advisor interviews and analysis.
Syringe Exchange Program Offers Harm Reduction Services

Privacy of Utmost Concern to Stigmatized Population

Three Ways Circle Health Fosters a Culture of Safety and Trust

**Convenient Locations**
- Parking sites to selected to preserve privacy while remaining convenient
- Multiple care sites available to let clients visit where they feel most comfortable

**Relatable Staff**
- Staffed by two non-clinical outreach workers; former addicts themselves
- Outreach workers trusted by clients to recommend screening services (e.g., HIV and Hepatitis C rapid tests) and recovery programs
- 11-18 years of experience serving on the van

**Emphasis on Privacy**
- Clients provided with anonymous identification codes to track services provided, frequency of usage, distance travelled
- Code language for syringe and testing services in stationary clinic to protect client privacy

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**Case in Brief: Circle Health Services’ Syringe Exchange Program**

- Federally Qualified Health Center in Cleveland, Ohio providing medical, dental, behavioral, and HIV services
- Established mobile and stationary one-for-one Syringe Exchange Program in 1995 to combat the growing HIV and opioid epidemics; services are free to Syringe Exchange clients and include rapid HIV and Hepatitis C screenings, flu vaccinations, health education, and provision of free harm reduction kits
- Coordinate with community stakeholders (e.g., judges, policymakers, law enforcement) and medical partners (e.g., detox and treatment centers, hospitals) to connect clients to the full continuum of care
- Exchanged 495,000 needles with 4,000 clients in 2016, marking a 38% increase in needles exchanged and a 25% increase in clients served from 2015. Clients are less likely to have Hepatitis C or HIV than other users; most clients are screened, but have not tested positive for HIV in over two years

Source: Population Health Advisor interviews and analysis.
Clinic Brings Care to Community Organizations Serving Homeless Population

Program Primarily Focuses on Eliminating Transit Barriers that Impede Access to Care, Medications

HOMES¹ Program Addresses Needs of Homeless Population During and After Visit

- **Clinical Care**: Mobile clinic staff provide acute and chronic disease care, education, check-ups, immunizations, mental health counseling, and dental care for children and adults.
- **Psychosocial Services**: Supplemental services vary by site and population need (e.g., staff health educator, interpreter, psychologist when visit domestic violence shelter).
- **Medication Access**: Pharmacy supplies 35 medications for patients free of charge to enable patients to start regimen immediately.
- **Referrals to Other Programs**: Staff connect patients to other programs (e.g., specialty clinics, housing support).
- **Specialty, Emergent Care**: 22-person shuttle loops around central business district to Parkland main campus for additional care (e.g., x-rays, ED care, Class A pharmacy).

**Needs Addressed on the Clinic**
- Referrals to Other Programs
- Special care

**Needs Addressed After Clinic Visit**
- Specialty, Emergent Care
- Social services
- Medication access

Case in Brief: Parkland Health & Hospital System’s HOMES Program

- 862-bed safety-net and teaching hospital system, including 20 community-based clinics and 12 school-based clinics in Dallas County, Texas
- Established mobile HOMES program to increase access to medical, dental, and behavioral health care for homeless children and adults
- Five medical and one dental mobile clinic visit 31 different community partners to serve existing concentrations of individuals with unstable housing (e.g., shelters, homeless agencies, transitional housing, permanent supportive housing); partners are chosen based on logistical factors (e.g., presence of a climate controlled waiting area for patients, minimum number of patients)
- Nurse, physician or advanced practice provider, and driver deliver immediate care supplemented by an on-site Class D pharmacy; additionally, a 22-person shuttle transports homeless patients to Parkland’s main campus for specialty, emergent care, and prescriptions
- In 2015, the HOMES program served 9,377 patients, 78% of whom were uninsured, with an annual budget of $5 million

¹) Homeless Outreach Medical Services.

Source: Population Health Advisor interviews and analysis.
Mobile Care Chicago

- Non-profit organization in Chicago, IL
- In response to the high volume of asthma-related ED visits and deaths in Chicago, offer free medical and preventive care, education, and support to low-income children in partnership with local schools
- Community Health Workers (CHWs) distribute surveys to identify patients with asthma symptoms and conduct home visits when necessary
- Van staff (two Nurse Practitioners, two Medical Assistants, one Clinic Technician) travel to 47 partner schools approximately once per month to conduct allergy assessments and provide education and ongoing treatment
- The percentage of children who had to visit the hospital or ED for asthma symptoms dropped from 36% to 3% within one year of treatment, which saved the local health care system an estimated $6.7 million

Limited Asthma Specialist Access Necessitates Need for Mobile Intervention

CHWs Oversee Relationships with Partner Schools and Patient Families, Offer Home Assessments

Interdisciplinary Team Offers Ongoing Specialty Asthma Care

1. Survey
   - CHWs distribute yearly surveys to partner schools to identify children with asthma symptoms
   - Connect with families to schedule appointments at school where adult can be present

2. Patient Visit
   - Van staff diagnose patients, conduct allergy assessments, and provide medication
   - Educate patients and families about asthma treatment and common triggers

3. Ongoing Treatment
   - Van staff provide care to patients once per season on average
   - Patient education reinforced by each staff member

4. Home Assessments
   - CHWs conduct home assessments for approximately one-third of patients to address asthma triggers
   - Target patients who follow treatment plan but are not improving

Mobile Clinic is Sole Source of Care for Working Poor in Rural Appalachia

Clinic Provides Medical Home for Patients, Giving Access to Care They’d Otherwise Go Without

Three Ways Health Wagon Maximizes Available Resources

<table>
<thead>
<tr>
<th>Utilizing Pharmacy Connection Program</th>
<th>Supplementing Nurse-Led Program with Volunteers</th>
<th>Collecting Fee from Patients Who Can Afford to Pay</th>
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<tbody>
<tr>
<td>98% of patients are uninsured</td>
<td>Clinical care provided exclusively by nursing team (e.g., DNP, RNs, LPNs, NP)</td>
<td>General funding comes from philanthropic support, state funding, grants/foundation support, and drug companies</td>
</tr>
<tr>
<td>Pharmacy Connection program provides patients with free or reduced-cost medication by cross-searching a database of Patient Assistance Programs</td>
<td>Services supplemented by specialists and residents recruited from state academic institutions, student volunteers</td>
<td>Patients asked to pay optional $10 administrative fee, contributing to a sense of ownership over their care</td>
</tr>
<tr>
<td>$1.2 M Pharmacy assistance provided in 2013</td>
<td>$1 M Health care provided in 2013</td>
<td>$25K Approximate annual amount raised through fee</td>
</tr>
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Case in Brief: The Health Wagon

- Non-profit organization providing health care to medically underserved in rural Southwest Virginia
- Created in 1980 to bring primary, preventive, dental, behavioral health, telehealth, and specialty care to individuals and families without insurance; the program now operates one mobile clinic and two stationary sites
- In addition to routine services, also provide coordinated outreach to region through “health expeditions” where individuals can receive free eye, dental, and medical care in a culturally sensitive environment
- Staffed by nurse-led clinical team, outreach coordinator, director of operations, administrative assistant, director of development, data systems coordinator, receptionist; specialty care and telehealth capabilities supplemented by volunteer clinicians from state academic institutions
- Provided $1 million of health care and $1.2 million of pharmaceutical assistance to 11,000 patients in 2013, 98% of whom are uninsured

Source: Population Health Advisor interviews and analysis.
Action Plan: Developing a Mobile Clinic Program
# Action Steps for Developing Your Own Mobile Clinic Program

<table>
<thead>
<tr>
<th>Action Step</th>
<th>How To</th>
<th>Additional Insights</th>
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</table>
| **Determine goal or business case** |                                                                              | | (1) Review data and engage community to identify primary population needs, access barriers  
(2) Zero in on specific goal and target population (e.g., improve access for uninsured, reduce costs for insured high-utilizers, overcome transportation barriers for a specific zip code)  
(3) Determine whether problem could be solved via traditional means and whether other mobile clinics operate in service area  
(4) Decide how mobile clinic services would fit into overall care continuum for target population (e.g., exclusive care provider, temporary entry point, provider of a subset of services) |
| **Identify partners and funding sources** |                                                                              | | (1) Secure hospital commitment; engage partners aligned with objective, familiar with target population  
(2) Identify funding sources; set expectations for start-up and maintenance costs  
(3) Establish clear ownership of operational details (e.g., hiring, outreach, service provision, vehicle maintenance, coordinating with community leads) as well as standards for referral and communication protocols (e.g., warm handoffs) |
| **Hire and train staff**         |                                                                              | | (1) Identify minimum number and type of core van staff; supplement with additional volunteers or rotating providers (e.g., medical students, community members, community organization staff)  
(2) Ensure staff can speak the most common languages spoken in target community and reflect diversity of patients  
(3) Offer training in cultural competency and consider cross-training staff to be able to deliver all services offered |
| **Manage logistics**             |                                                                              | | (1) Determine which locations to visit and where to park the vehicle  
(2) Decide how frequently to visit each location (e.g., once per month or week) and where to post schedule |
| **Evaluate impact**              |                                                                              | | (1) Track measures that reflect: cost and cost savings, health disparities and community health, indicators of process quality  
(2) Gather qualitative feedback from population served |

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