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# FEASIBILITY AND SAFETY OF A FIELD CARE CLINIC AS AN ALTERNATIVE AMBULANCE DESTINATION DURING THE COVID-19 PANDEMIC

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## Abstract

**Background:** Anticipating an increased utilization of healthcare facilities during the COVID-19 surge, the San Francisco Department of Public Health developed a plan to deploy neighborhood-based Field Care Clinics (FCCs) that would decompress emergency departments by serving patients with low acuity complaints. These clinics would receive patients directly from the Emergency Medical Services (EMS) system. Transports were initiated by a paramedic-driven protocol, originally by EMS crews and later by the Centralized Ambulance Destination Determination (CADDiE) System. In this study, we evaluated the outcomes of EMS patients who were transported to the FCC, specifically as to whether they required subsequent transfer to the emergency department.

**Methods:** We performed a retrospective study of all patients transported to the Bayview-Hunters Point (BHP) neighborhood FCC by EMS between April 11th, 2020, and December 16th, 2020. Descriptive statistics and Chi-Square Tests were used to analyze patient data.

**Results:** In total, 35 patients (20 men, 15 women, average age of 50.9 years) were transported to the FCC. Of these, 16 were Black/African American, 7 were White, 3 were Asian, with 9 identifying as of other races and 9 of Hispanic ethnicity. Twenty-three of these transports resulted from a CADDiE recommendation. Approximately half (n=20) of calls originated within the BHP neighborhood. The most frequent patient complaint was “Pain.” Of patients transported to the FCC, 23 were treated and discharged. The 12 remaining patients required hospital transfer, with 3 being discharged after receiving treatment in the emergency department and 9 requiring hospital admission, psychiatric, or sobering services. The likelihood of hospital transfer did not

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significantly vary by sex (p=0.41), 9-1-1 call origination relative to BHP neighborhood (p=0.92), or CADDiE recommendation ($p$=0.51).

**Conclusion:** Three-fourths of patients who required subsequent hospital transfer were admitted or required specialized services, suggesting that the FCC was viable for managing low acuity conditions. However, the underutilization of the FCC by EMS as a transport destination and a high hospital transfer rate indicates training and protocol refinement opportunities. Despite the small cohort size, this study demonstrates that an FCC alternative care site can act as a viable source for urgent and emergency care during a pandemic.

### Keywords

field care clinic; alternative care site; alternative destination; COVID-19; hospital decompression; emergency medical services

## BACKGROUND

The need for alternatives to transporting patients to traditional medical facilities and emergency departments (EDs), including out-of-hospital options when these facilities are overwhelmed in times of disaster, continues to be a challenge (Gregg et al., 2020). In an effort to reduce the impact on healthcare facilities during the anticipated COVID-19 surge in March 2020, the San Francisco Department of Public Health (SFDPH) developed a plan to deploy neighborhood-based Field Care Clinics (FCCs) that would receive patients meeting certain criteria from the Emergency Medical Services (EMS) system.

The San Francisco Field Care Clinic Program was modeled after the Disaster Medical Assistance Team (DMAT) response, which was developed by the National Disaster Medical System (NDMS) and has been utilized throughout the United States in disasters ranging from earthquakes and climate-related fires to hurricanes and floods. While these facilities can provide semi-controlled environments for patient care with temperature control, lighting, and stable treatment platforms and are adaptable in size and capabilities, they cannot fully replace the complex care provided by traditional emergency departments, trauma centers, and intensive care units. Whereas other COVID-19 alternative care sites were designed to provide ongoing care to decompress hospitals (Goei & Tiruchittampalam, 2020; Gregg et al., 2020), the goal of San Francisco's FCC was to decompress emergency departments and the EMS system by serving patients with low acuity complaints. This model differed from other sites as patients were received directly from EMS using a paramedic--driven protocol without an ED evaluation (Goei & Tiruchittampalam, 2020; Gregg et al., 2020). Recognizing that time and resources were limited to address the uncertain magnitude of the first surge in cases, SFDPH chose to pilot the program and selected the first site based on anticipated need and operational capability.

The first FCC was placed in a weatherized tent co-located at the Public Health Department's Southeast Health Center (SEHC), a county-run clinic in the Bayview-Hunters Point Neighborhood (BHP). The FCC was equipped to handle both confirmed and suspected COVID-19 patients and other non-COVID-19 related complaints. The BHP was selected as it has higher population densities of Asian, Black/African American, and Hispanic residents

who were disproportionately affected by COVID-19 (Khanijahani et al., 2021; Magesh et al., 2021)especially in terms of morbidity and mortality. This study aimed to systematically review the evidence on the association of racial/ethnic and socioeconomic status (SES. Compared to San Francisco at large, the BHP has a higher rate of poverty and a greater proportion of residents on Medicaid or uninsured (Bayview & Hunters Point PUMA, CA | Data USA, n.d.), (Census Profile, n.d.). There is also, on average, a larger number of persons per household (Census Profile, n.d.)

In terms of employment, BHP residents are more likely to work in jobs in the service industry, transportation, or construction that require in-person attendance than occupations that could be performed remotely (Bayview & Hunters Point PUMA, CA | Data USA, n.d.). Over the course of the pandemic, the BHP also experienced the highest rate of COVID-19 infection in the city. As of May 2022, almost one-third of BHP residents had contracted COVID-19, a rate 30% higher than that of the next highest affected neighborhood in the city (City and County of San Francisco, n.d.). Cumulative case rates by neighborhood as of May 22, 2022, are shown in Figure 1.

Logistically, the nearest hospital is the county “safety-net” hospital, located 10 minutes north of the FCC site by car. A map of local receiving facilities in relation to the FCC is shown in Figure 2. This county hospital was also anticipated to be the most impacted by COVID-19. It was hoped that an FCC in the BHP could divert lower acuity patients from the county emergency department, reduce EMS travel time so units could return to service faster, and allow patients to receive care closer to their homes. In addition, the community trusted the existing SEHC, and theits staff had become more comfortable managing higher acuity patients compared to many primary care practices. In consideration of these factors, coupled with a focus on social justice and health equity, San Francisco opened the first Field Care Clinic in the BHP.

To determine which patients were eligible for care at the FCC, a paramedic-driven protocol was created. This protocol is shown in Figure 3.

Shortly after the FCC came online, another pilot project, the Centralized Ambulance Destination Determination (CADDiE) System, was introduced to help coordinate ambulance distribution to receiving hospitals. A CADDiE base station was staffed by either an Emergency Medicine physician, paramedic supervisor, or both, and equipped with real-time data on ambulance transport activity and diversion status for each hospital in the system. When paramedics in the field encountered a patient who was not in critical condition and did not require care at a specialty center, such as a trauma or burn center, they were required to contact the CADDiE base station via radio. CADDiE would consider multiple factors in recommending a destination, including geography, the patient’s hospital preference, the current diversion status of hospitals, and recent EMS system destination selections. In addition to traditional hospital destinations, CADDiE could also recommend transport to the FCC for patients that met predetermined criteria.

In this pilot study, we evaluated the efficacy of using an FCC as an alternative destination for ambulances by investigating the dispositions of EMS patients who were transported to the FCC instead of the emergency department, with and without CADDiE recommendations.

## METHODS

We conducted a retrospective study of all patients transported via EMS to the FCC serving the Bayview-Hunters Point (BHP) neighborhood between April 11th, 2020, and December 16th, 2020. Prehospital chart data was extracted from a data aggregator (Biospatial, Research Triangle Park, USA), and FCC data was extracted from EPIC (EPIC Systems, Verona, USA). Data was manually entered into REDCap, a HIPAA-compliant web-based data collection tool. Data analysis was conducted in SPSS Statistics (IBM, Armonk, USA) using descriptive statistics and Chi-Square tests. Informal qualitative comments that program managers gathered via weekly EMS operations and quarterly EMS Advisory Council meetings, which included anonymous feedback from EMS Providers, FCC staff, and ED providers, were shared with the research team. These comments were collected in the context of an ongoing process and quality improvement of the alternative site during implementation, and they were utilized to help provide context to the study. However, provider feedback was beyond the scope of this study, and results were not tabulated or thematically coded. The study received approval from the University of California San Francisco's Institutional Review Board.

## RESULTS

Between April 16th, 2020, and December 16th, 2020, 35,615 calls from the field to CADDiE resulted in CADDiE recommending a destination hospital, representing 89.9% of the 39,606 CADDiE eligible transports. After excluding transports that occurred outside of the FCC's operating hours, 18,081 transports were potentially eligible for FCC care if they qualified for the protocol shown in Figure 3. However, the FCC was recommended as a destination only 48 times.

Out of the 48 CADDiE recommendations for FCC transport, only 23 patients (47.9%) were transported to the FCC, with 23 patients transported to traditional receiving hospitals instead. The remaining two transport destinations could not be determined due to missing records.

In addition to the 23 patients recommended by CADDiE for FCC care, two were transported to the FCC against a CADDiE recommendation for a different facility. In contrast, ten were transported to the FCC without CADDiE involvement. Thus, a total of 35 patients were transported to the FCC by EMS. Most transports to the FCC occurred in the first three months of operation, as shown in Figure 4.

Of the 35 patients transported to the FCC, 20 were men, 15 were women, and the average age was 50.9 years. Sixteen of these patients were Black/African American, 7 White, 3 Asian, and 9 self-identified as another race. Nine also identified as Hispanic. Almost two-thirds (n=20) of calls originated in the BHP neighborhood, with 88.6% (n=31) of patients transported by the San Francisco Fire Department and the remaining (n=4) by private

EMS agencies. The most common category of patient complaints was “pain” (paramedic impression n=12; FCC discharge diagnosis: n=9). Demographics of transported patients and patient complaints are shown in Tables 1 and 2, respectively.

Among patients transported to the FCC, 65.7% (n=23) were treated and discharged, while 34.3% (n=12) required subsequent hospital transfer. Patient dispositions are shown in Figure 5.

The likelihood of hospital transfer did not significantly vary by sex ($p$=0.41), 9-1-1 dispatch level ($p$=0.55), arrival before noon ($p$=0.18), pain-related complaint (paramedic impression: $p$=0.51; discharge diagnosis: $p$=0.14), or 9-1-1 call origination within or outside of the BHP neighborhood ($p$=0.92). The use of CADDiE direction was not associated with a change in the likelihood of hospital transfer ($p$=0.51). In the two cases, when CADDiE recommendations against transporting to the FCC were not followed, one resulted in subsequent hospital transfer. Characteristics of patients transported to the FCC are shown in Table 3. The FCC eligibility protocol was followed in 100% of CADDiE directed transports (n=23) and 94.3% of overall transports (n=33) to the FCC. Patients in the remaining two transports had a heart rate greater than 120 beats per minute. CADDiE was not contacted for either of these transports, and only one of these cases resulted in subsequent hospital transfer.

Of the 12 patients transported from the FCC for additional care, 3 were treated in the emergency department and discharged, while the remaining 9 required hospital admission, psychiatric, or sobering services. Details of subsequent care are shown in Table 4.

Two of the 3 patients who were treated and discharged in the ED were referred due to concerns about gastrointestinal bleeding. The third patient had a low oxygen saturation and required an ultrasound-guided intravenous line. Of the 9 patients admitted to the hospital, 3 were admitted for respiratory conditions, 1 was sent to the ED to rule out a deep vein thrombosis and was admitted for lower extremity cellulitis, and another was admitted for cellulitis and pyelonephritis. The sixth patient was referred to the ED for an MRI and received urgent surgery for lumbar stenosis. One additional patient was referred to the ED for a chest pain workup but expressed suicidal ideation and was transferred to a psychiatric center. The remaining eight and ninth patients were transported directly to a sobering center (n=1) or psychiatric emergency department (n=1).

## DISCUSSION

A significant challenge for the FCC was low utilization by EMS and the CADDiE system. Of the 35,615 calls to CADDiE that were initiated, 18,081 occurred during the FCC EMS receiving hours of 8 am to 5 pm. Although not all of these patients would have met the criteria for FCC transport, only 48 FCC transport recommendations were made. This represented 0.3% of all CADDiE directed transports.

This underutilization may have been in part due to lack of familiarity with the FCC by CADDiE physicians and paramedics. Based on informal feedback from CADDiE clinicians and insights from operations, the FCC may not have been routinely considered

as a destination choice for patient care despite appropriate indications. Prior literature has identified the need for clear organizational communication to bolster employees' commitment to change (Harrison et al., 2022; Khaw et al., 2022). Dissemination of changes was limited as neither FCC leadership nor the Department of Public Health were able to communicate with EMS providers directly, instead having to rely on the leadership of each respective EMS entity to relay updates to their employees. This made it difficult to convey updated information, such as the FCC's hours and capabilities, to EMS Clinicians.

Additionally, CADDiE and the FCC began operations during the same general time period. Many of the physicians and paramedics operating CADDiE worked primarily in clinical settings and were not involved in the planning and operation of the FCC itself. The EMS agencies also had limited experience using these types of alternate care sites.

Healthcare management literature has reported that employees' affective commitment to change depends on factors that include employee participation in change decisions and frequency of changes (Harrison et al., 2022). As COVID-19 prompted many leadership-initiated organizational changes in a short period of time, in addition to CADDiE and FCC implementation, it is possible that EMS providers and CADDiE clinicians who were familiar with the FCC chose not to utilize the FCC due to a lack of affective commitment to the change.

Furthermore, patients who met exclusion criteria, including those with unstable vitals as outlined in the protocol shown in Figure 3, non-critical trauma patients, patients in police custody, or transports to the San Francisco Sobering Center, would also not have been eligible for FCC care. Likely, many of the 18,081 CADDiE-directed transports potentially eligible for FCC care based on the time and classification of the call may have actually not been eligible based on the factors noted above. Therefore, it is likely that the true percentage of FCC-eligible patients who were transported to the FCC is higher than the 0.3% reported. Evaluating the efficacy of CADDiE or the protocol for FCC utilization was beyond the scope of this study.

In addition, although the FCC theoretically had fixed hours, EMS could only transport patients to the FCC if it was staffed with an emergency physician and nurse and logged into the city's Reddinet System (Hospital Association of Southern California, Los Angeles, USA). Hours of operation could vary, making it difficult for EMS clinicians to know if the FCC was open to receiving patients. Single-event experiences of clinicians also became important in the entire group's acceptance of the change. Rapid patient turnovers were challenging at times due to the novelty of the process for clinic personnel and EMS clinicians. Once these issues were resolved, it was difficult to counter the early narrative of patient offload delays at the clinic compared to the emergency departments. Since San Francisco's EDs never reached the saturation levels initially predicted, both due to the downturn of ED visits and stringent public health measures, EMS clinicians were never in a situation where an existing ED was not available to accept their patients, perpetuating the use of routine, rather than novel processes.

Of the 48 CADDiE FCC transport recommendations, only 23 resulted in transport to the FCC. Feedback from EMS field clinicians indicated that patients felt apprehensive about being taken to an alternative clinic site with which they were unfamiliar. Transportation to the FCC was never mandated, and these patients would often refuse the FCC in favor of a traditional emergency department. Field clinicians also reported that some patients declined the FCC based on its location and had concerns regarding transportation back to their neighborhood of residence following discharge.

These challenges demonstrate the importance of patient and clinician awareness of alternative destinations and their potential benefits. If 5% of CADDiE-eligible patients were directed to the FCC, this would have resulted in 904 transports to the site during the study period. If the percentage of subsequent hospital transfers remained consistent with the results of this study, it would be expected that 594 patients could have avoided the emergency department. However, this would also have resulted in 309 additional transports from the FCC to the hospital. Therefore, more accurate triage criteria to better determine the most appropriate transport destinations would be an essential step in growing such a program.

The challenge of accurately determining which patients can be treated in alternative settings is a common finding in the literature (Blodgett et al., 2021). One study found that paramedics under-triaged 9.6% of patients when compared to a physician (Pointer et al., 2001). In this study, 55% of the patients placed by paramedics in the lower acuity categories were found to be miscategorized, with 48.7% of misclassifications resulting from paramedics incorrectly applying the guidelines, inappropriately diverting 8.4% of patients away from the ED (Pointer et al., 2001). A literature review found similar results, reporting under-triaging by up to 32% (Morganti et al., 2014). However, not all studies found negative results. A study conducted in King County, WA found that emergency medical technicians (EMTs) were able to correctly identify low acuity patients eligible for alternative destinations 97% of the time. This success resulted in a 15% reduction in eligible patients transported to the ED (Schaefer et al., 2002). Paramedics have also been able to divert patients to acute psychiatric crisis centers successfully. In one study, ED transfers within four hours, considered to be the result of inappropriate destinations, occurred in only 4.5% of transports (Creed et al., 2018). In the studies that had defined inclusion criteria for which patients would be eligible for alternative care sites, under-triaging was often the result of paramedics and EMTs misapplying study guidelines (Morganti et al., 2014; Sawyer & Coburn, 2017). Of note, FCC eligibility guidelines were misapplied on only two occasions. It is possible that this relatively low instance of under-triage is a result of San Francisco EMS Agencies' previous experiences utilizing alternative destinations. A previous study conducted in San Francisco found that only 4.4% of patients transported to a sobering center required subsequent hospital transfer (Smith-Bernardin et al., 2019).

Of the patients who required subsequent hospital transport from the FCC, 75% were either admitted or required specialized care, such as psychiatric or sobering services. This high admission rate suggests that the FCC effectively managed low-acuity patients and accurately determined which patients needed admission or higher levels of care. Of the three who were transferred to, and subsequently discharged from, emergency departments, all were referred

for imaging that was beyond the capabilities of the FCC. Thus, the main opportunities for improvement should involve EMS clinician and patient education regarding the capabilities of the site and further refinement of eligibility criteria. Sites such as the FCC have the potential to provide a viable alternative to the emergency department in appropriate situations.

Limitations of this study include the small sample size of patients, mainly due to underutilization of the FCC by CADDiE, and the overall lower number of COVID-19 hospitalizations in the San Francisco Bay Area than were anticipated due to early and aggressive public health measures, including the shelter in place order. Although the paramedic supervisors who provided CADDiE determinations had access to emergency physicians as online medical direction, CADDiE did not record if the destination determination was made by a physician, paramedic supervisor, or both. As some studies have shown difficulty in EMS's ability to triage to alternative destinations (Morganti et al., 2014; Pointer et al., 2001)primary care clinics, mental health centers, dialysis centers, it is possible that the source of the CADDiE determination could have affected the likelihood that the patient was suitable for FCC care. Further studies should consider standardizing the process for utilizing an alternative destination.

As a retrospective cohort study, researchers were limited by the types of available data and the potential for unidentified confounders that may have affected the outcomes observed for this cohort compared to all other EMS patients during this study period. For example, researchers were only able to access EMS transport records to the FCC, clinical records from the FCC, and hospitalization records of those transported directly from the FCC to the affiliated public hospital. Therefore, it is possible that patients considered successfully treated at the FCC and discharged could have self-transported to the ED or called 9-1-1 again and received medical care from a facility not included in the study, potentially resulting in a higher number of patients considered successfully treated at the FCC than the true number. As other municipalities may lack the resources to implement a centralized ambulance destination program such as CADDiE, CADDiE use may further impact generalizability.

## CONCLUSION

As a pilot project, the FCC was successful in that most of its patients came from the neighborhood it intended to serve and did not require transfer to the ED. However, low utilization and a high rate of subsequent hospital transfer demonstrate the need to better communicate the resources of the FCC to both patients and clinicians and refine the protocol used to triage patients to the site.

Although the FCC was initiated because of the COVID-19 pandemic, this model could also be useful to reduce ED utilization in areas where limited access to care or geographical constraints result in extended transport times. Further research with a larger sample size and better integration with existing emergency medicine services is warranted to better characterize the appropriate use and efficacy of such programs.

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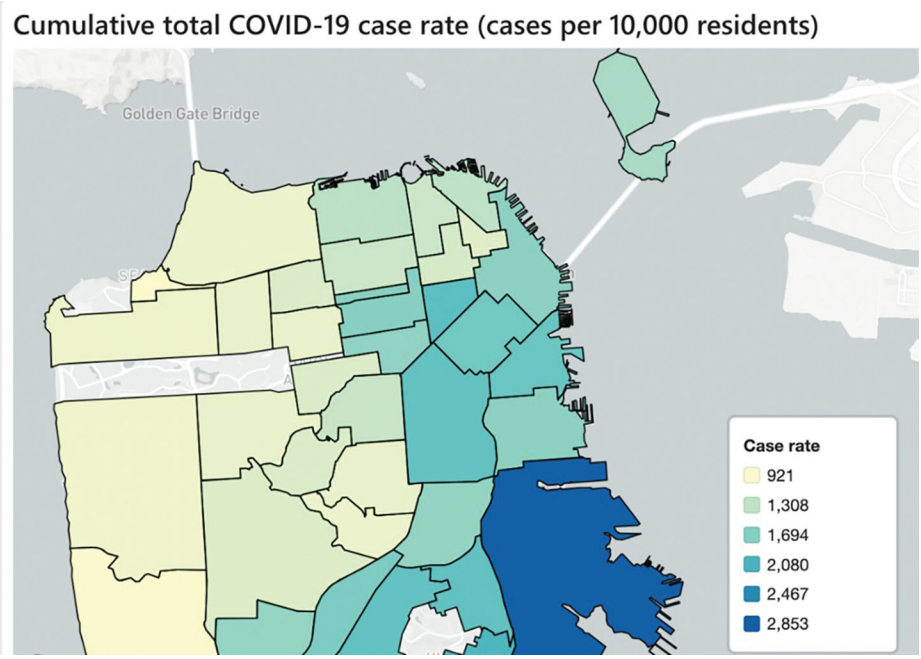


**Figure 1 –. Cumulative Case Rates –**

Cumulative total COVID-19 case rate Cases per 10,000 residents. This map is publicly available at https://sf.gov/data/covid-19-case-maps#total-cases-map

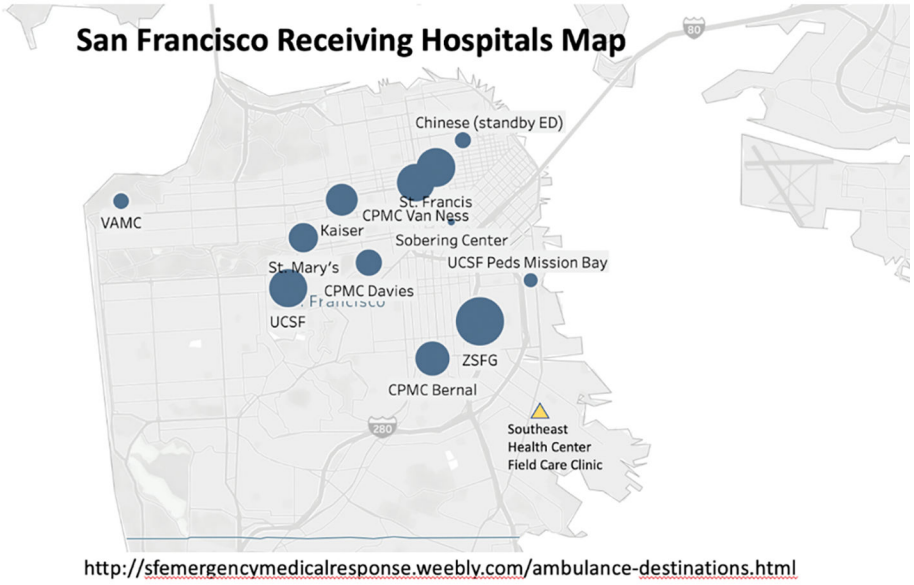


**Figure 2 –. Base Hospital Map in Relation to FCC –**

San Franfrisco receiving hospitals. http://sfemergencymedicalresponse.weebly.com/ambulance-destinations.html

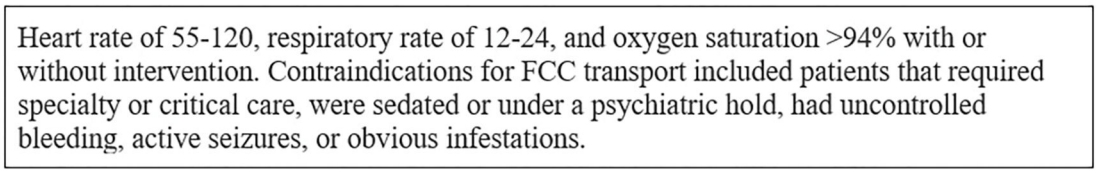


**Figure 3 –.**
EMS Criteria for Field Care Clinic Transport

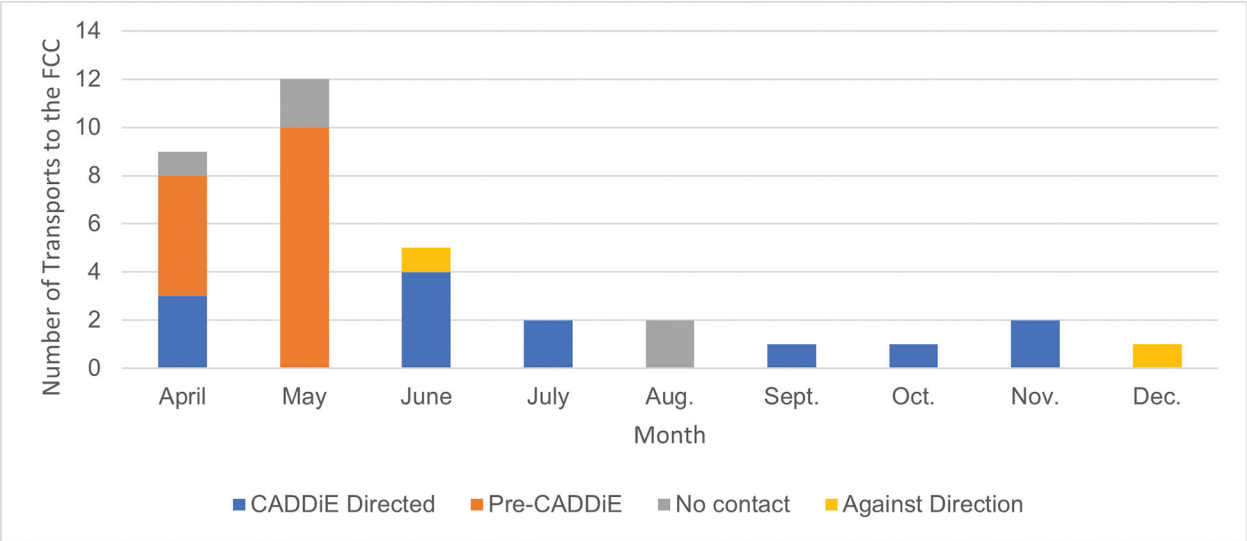


**Figure 4 –.**
Number of Transports to the Field Care Clinic by Source

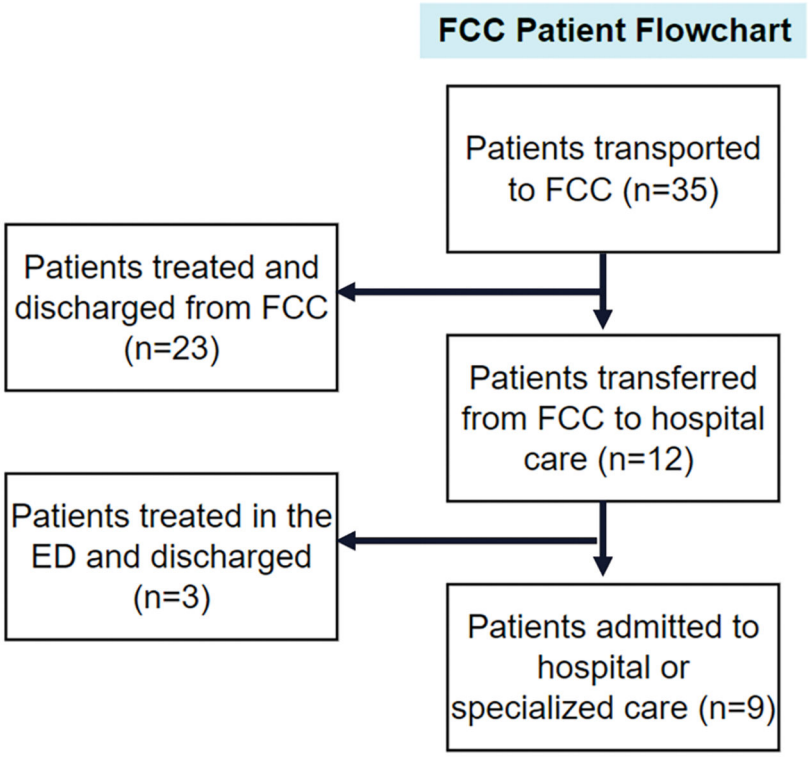


**Figure 5 –.**
Field Care Clinic Patient Flowchart

**Table 1:**

Demographic Characteristics of FCC Patients

| **Race** | **Patients** | **Percent** |
|---|---|---|
| Black/African American | 15 | 42.9% |
| White | 7 | 20.0% |
| Asian | 3 | 8.6% |
| Native American | 1 | 2.9% |
| Other | 9 | 25.7% |
| **Ethnicity** | | |
| Hispanic | 9 | 25.7% |
| **Sex** | | |
| Assigned Male at Birth | 20 | 57.1% |
| Assigned Female at Birth | 15 | 42.9% |
| **Age** | | |
| 20–39 | 9 | 25.7% |
| 40–64 | 17 | 48.6% |
| 65+ | 9 | 25.7% |
| **Origin of Call** | | |
| Bayview-Hunter’s Point | 20 | 57% |
| Non-Bayview-Hunter’s Point | 15 | 43% |
| **Dispatch Level** | | |
| Code 2 | 18 | 51% |
| Code 3 | 17 | 49% |
| **Service Level** | | |
| ALS | 35 | 100% |
| BLS | 0 | 0% |
| **CADDiE-Directed** | | |
| CADDiE-Directed | 23 | 66% |
| Non-CADDiE Directed | 12 | 34% |
| **Arrival Time** | | |
| Arrival 8am-12pm | 17 | 49% |
| Arrival 12pm-5pm | 18 | 51% |
| **Protocol Vitals** | | |
| Criteria Followed | 33 | 94% |
| Criteria Violated | 2 | 6% |
| **Pain Related Complaint** | | |
| Pain Related (Medic Impression) | 12 | 34% |
| Pain Related (Discharge Diagnosis) | 8 | 23% |

**Table 2:**

Comparison of Patient Complaints by Paramedic Impression and FCC Discharge Diagnosis

| Patient Complaints | | |
|---|---|---|
| **Complaint Category** | **Medic Impression** | **FCC Discharge Diagnosis** |
| Gastrointestinal Bleeding | 5 (14.3%) | 4 (11.4%) |
| Neurological/Altered Mental Status | 3 (8.6%) | 14.3% (5) |
| Other | 6 (17.1%) | 7 (20%) |
| Pain | 12 (34.3%) | 8 (22.9%) |
| Respiratory | 3 (8.6%) | 6 (17.1%) |
| Substance Use | 1 (2.9%) | 3 (8.6%) |
| Syncope | 1 (2.9%) | 2 (5.7%) |
| Weakness | 4 (11.4%) | 0 (0%) |

**Table 3:**

Characteristics of Patients Transported from the FCC to the ED

| Episode Characteristics | Patients Transported to Hospital ( n / N ) (%) | Chi-square p-value |
|---|---|---|
| **Sex** | | |
| Male | 8 / 20 (40%) | 0.41 |
| Female | 4 / 15 (26.70%) | |
| **Age** | | |
| 20–39 | 2 / 9 (22.20%) | 0.61 |
| 40–64 | 6 / 17 (35.20%) | |
| 65+ | 4 / 9 (44.40%) | |
| **Origin of Call** | | |
| Bayview-Hunter's Point | 5 / 15 (33.30%) | 0.92 |
| Non-Bayview-Hunter's Point | 7 / 20 (35.00 | |
| **Dispatch Level** | | |
| Code 2 | 7 / 18 (38.90%) | 0.55 |
| Code 3 | 5 / 17 (29.40%) | |
| **CADDiE-Directed** | | |
| CADDiE-directed | 5 / 12 (41.70%) | 0.51 |
| Non-CADDiE directed | 7 / 23 (30.40%) | |
| **Arrival Time** | | |
| Arrival 8am-12pm | 5 / 20 (25.00%) | 0.18 |
| Arrival 12pm-5pm | 7 / 15 (46.70%) | |
| **Protocol Vitals** | | |
| Criteria followed | 11/ 33 (33.30%) | -- |
| Criteria violated | 1 / 2 (50.00%) | |
| **Pain-Related Complaint** | | |
| **Based on Medic Impression** | | |
| Yes | 7 / 23 (30.40%) | 0.51 |
| No | 5 / 12 (41.70%) | |
| **Based on Discharge Dx** | | |
| Yes | 11 / 27 (31.40%) | 0.14 |
| No | 1 / 8 (12.50%) | |

**Table 4:**

Disposition of Patients Transferred to Higher Levels of Care

| Reason for Transfer | Disposition |
|---|---|
| Concern for gastrointestinal bleeding, referred for imaging (n=2) | Discharged from ED |
| Low oxygen saturation, referred for ultrasound-guided intravenous line (n=1) | Discharged from ED |
| Alcohol intoxication (n=1) | Sobering center |
| Low oxygen saturation (n=1) | Admitted to hospital |
| Concern for pneumonia, possible sepsis (n=1) | Admitted to hospital |
| COVID+, low oxygen saturation (n=1) | Admitted to hospital |
| Agitation and required psychiatric evaluation (n=1) | Admitted to psychiatric facility |
| Referred to rule out pulmonary embolism and deep vein thrombosis (n=1) | Admitted to hospital for lower extremity cellulitis |
| Referred for additional evaluation of chest pain (n=1) | Expressed suicidal ideation, transferred from ED to psychiatric facility |
| Referred for MRI due to neurological deficits (n=1) | Received urgent surgery for lumbar stenosis and subsequent hospital admission |
| Referred for abdominal imaging (n=1) | Admitted to hospital for cellulitis and pyelonephritis |