PVTA RideCare-PV Program Evaluation Report

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PARTNERS FOR HEALTH EQUITY

Acknowledgments

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Design Team

Tolu Oke, Project Manager, Pioneer Valley Transit Authority
Moumita Dasgupta, Co-Project Manager, Augsburg University
Alisa Ainbinder, Project Evaluation Lead, Public Health Institute of Western Massachusetts
Bonnie Shepard, Independent Consultant, Public Health Institute of Western Massachusetts

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About the Public Health Institute of Western Massachusetts

The Public Health Institute of Western Massachusetts (PHIWM), formerly Partners for a Healthier Community, is a 501(c)(3) non-profit organization based out of Springfield, MA whose mission is to build measurably healthier and more equitable communities through community engagement, collaborative partnerships, research and evaluation, and policy advocacy. PHIWM is committed to improving the public's health by fostering innovation, leveraging resources, and building partnerships across sectors, including government agencies, communities, the health care delivery system, media, and academia.

PHIWM's Health Equity Statement

A historic legacy of social, economic, and environmental inequities, such as racism and gender-based discrimination, are embedded in societal institutions and result in poor health. These unjust inequities affect communities differently with some bearing a greater burden of poorer health. These inequities can influence health more than individual choices or access to healthcare. PHIWM recognizes its responsibility to dismantle these injustices by promoting health through policies, practices, and organizational systems that benefit all. We encourage others to join in these efforts.

Public Health Institute of Western MA
127 State Street
Springfield, MA 01103
www.PublicHealthWM.org

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Executive Summary

The RideCare-PV project was designed as an 18-month pilot program starting in late 2019 to increase access to healthcare for primary care patients with transportation barriers in the BeHealthy Accountable Care Organizations[1] in the greater Springfield, Massachusetts (MA) area. The program partnered with Baystate Health (BH) and Caring Health Center (CHC). BH is a non-profit serving more than 800,000 people in the Pioneer Valley of western Massachusetts. CHC delivers primary health services to over 20,000 patients in the greater Springfield area.

The RideCare-PV Program aimed to connect vulnerable patients to transportation options to improve health outcomes and reduce health inequities and financial waste. The program brought together multisector community stakeholders, including the Pioneer Valley Transit Authority (PVTA), an academic researcher, and the Public Health Institute of Western MA (PHIWM) to co-create solutions with the two partner health organizations and evaluate outcomes. The program led to the implementation of distinct transportation interventions at BH and CHC. Both organizations relied on hiring a Transportation Specialist (TS), however, the responsibilities of the position were different. BH's TS focused on helping patients navigate MassHealth's free Prescription for Transportation (PT-1) non-emergency medical van service[2] and the Montachusett Regional Transit Authority (MART) PT-1 scheduling platform. CHC's TS's main role involved scheduling patients on CHC's new free door-to-door dedicated van service.

In the aftermath of the COVID-19 pandemic, the RideCare-PV program was quickly implemented and evaluated. The evaluation based on specific assessment metrics revealed the program was effective. Over the course of the implementation year, the TS at CHC served 508 patients and helped schedule 1,817 appointments on CHC's dedicated van service. More than 70% of patients served used the service between one and three times, and about five percent used the service 12 or more times. The program led to a notable increase in the number of completed appointments at CHC and high satisfaction among users. The TS at BH directly served 79 patients and scheduled 257 appointments. More than half (54%) of the appointments arranged by the TS were successfully completed and only 7% resulted in no-shows – a much lower percent than the 20% norm for the whole patient population in 2019. The program at BH was particularly effective among more vulnerable and high-risk patients.

The quick pivot to implementation and evaluation in unpredictable conditions due to the pandemic was challenging and informed the program recommendations. The recommendations to CHC focus on additional investments to address the remaining unmet need for transportation among patients and to meet other challenges in the program. Recommendations to BH include instituting automatic screening and strengthening of their patient and appointment tracking systems to improve the reach of the TS. Though all results are preliminary, this project allowed the healthcare providers for the first time to address their patients' identified transportation barriers through a direct intervention.

[1] Until March 31, 2023, the BeHealthy Partnership included both Baystate Health and Caring Health Center.

[2] https://www.mass.gov/orgs/human-service-transportation-office

Introduction

Research indicates that missed or delayed appointments with health care providers due to transportation issues negatively affects patients' health and well-being, and disproportionately hurts low-income patients[3,4]. Transportation is an environmental factor that, alongside housing and air and water quality, is estimated to contribute 10% towards health outcomes, according to the *County Health Ranking* Models and the *100 million Healthier life* measurement system. Patients' inability to travel to health care providers can reduce children's school attendance, jeopardize employment income for patients with inflexible work hours, and undermine patients' mental health when they are unsuccessful in scheduling rides and making arrangements for transportation. Some studies have examined the impact of transportation barriers to health care on small, distinct subsets of individuals, such as children[5], older adults[6], or women for prenatal care[7]. Other research has focused on developing innovative solutions to work around some of the complex challenges related to transportation experienced by different geographic communities.[8] However, there are few data-driven evaluations of the complex landscape of issues from a systems perspective that are needed to develop targeted and integrated solutions to patients' transportation challenges.

Due to the irregular nature of most non-emergency medical trips – and the life-critical nature of completing these trips – transportation to primary care providers is a key focus for many organizations. The urgency of addressing non-emergency medical transportation has been further underscored by the development of a newer healthcare delivery model called the Accountable Care Organization (ACO). This model emphasizes preventive healthcare service as a central component, with medical payments made per patient rather than the typical fee-for-service model. At the start of this project, the BeHealthy Partnership (BeHealthy) ACO, which serves Springfield, Massachusetts, was comprised of Caring Health Center (CHC) (a local clinic), Baystate Medical Center (BH) (the largest regional healthcare provider), and Health New England (a local health insurance company).[9] The clinics involved in BeHealthy were estimated to have a 25% no-show rate for medical appointments, which comprises lost revenue of at least $1,000,000 directly attributable to transportation problems.[10]

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[3] Syed, S.T., Gerber, B.S. & Sharp, L.K. (2013) Journal of Community Health. 38: 976.

[4] Wallace R, Hughes-Cromwick P, Mull H, Khasnabis S. (2005). Access to health care and nonemergency medical transportation: Two missing links. Transportation Research Record: Journal of the Transportation Research Board. 1924:76–84.

[5] Ahmed, SM., Lemkau, JP., Nealeigh, N., Mann, B. (2001) Barriers to healthcare access in non-elderly urban poor American population. Health and Social Care in the Community. 9 (6) 445-453

[6] Association of transportation and health care utilization for chronic care management in rural North Carolina, 2005

[7] The Road to Health Care Parity: Transportation Policy and Access to Health Care, The Leadership Conference Education Fund, April, 2011

[8] For example, research conducted under the National Center for Mobility Management's NCMM Ride to Wellness grants.

[9] As of April 2023, Caring Health Center is now part of a different ACO partnership (the Community Care Cooperative).

[10] Preliminary analysis of the 2018 Care Need Survey at Baystate found 20% of people citing transportation as the reason for their missed appointments. Conservatively calculating, with 100,000 PCP appointments, an average no-show rate of 25% and $200 per missed appointment, the total lost revenue at Baystate due to transportation was estimated to be over $1,000,000.

Patients have been navigating a complicated transportation ecosystem in the Springfield region. In theory, patients in Springfield and neighboring areas have access to transportation options like the Pioneer Valley Transit Authority (PVTA) fixed service, PVTA paratransit and senior van service, Prescription for Transportation (PT-1) under MassHealth/Human Service Transportation offices, Taxi/Uber-Health/Lyft, Veterans Transportation Service, rides for Health (LifePath), Council on Aging Van Transportation, etc. However, research completed through the National Center for Mobility Management (NCMM) Healthcare Access Design Challenge found despite multiple services available, patients encounter barriers associated with eligibility criteria, geographic scope, hours of operation, trip type served, and fare price. This does not include many cultural, linguistic, and technological barriers that some patients experience in navigating this transportation landscape. Many times, patients depend on a less-than-optimal solution (e.g., catching a ride from a neighbor), which may result in missed medical appointments.

The PVTA was awarded funding from the Federal Transit Administration (FTA) for the RideCare-Pioneer Valley (RideCare-PV) project through the Access and Mobility Partnership Grant, which is comprised of two separate and distinct grant programs, the Innovative Coordinated Access and the Mobility Pilot Program (ICAM) and the Human Services Coordination Research Grant Program (HSCR). The ICAM Pilot Program grant supports capital projects such as projects to increase access to care, improve health outcomes, and reduce healthcare costs that address challenges for those who lack transportation access to healthcare. The HSCR program supports operating and capital projects that build upon identified gaps in services by implementing innovative solutions to improve local coordination or access to coordinated transportation services.

The RideCare-PV project was originally intended to be an 18-month mobility management pilot program aimed at connecting vulnerable patients to transportation options to increase access to healthcare and reduce health disparities and financial waste in the BeHealthy partnership. The pilot program was developed during the NCMM Healthcare Access Design Challenge had two main components to address the identified barriers:

- First, hiring a staff of Transportation Specialists (TS) (three) who would serve as resources for medical staff (such as Community Health Workers), community-based organizations, patient family members, and the patients themselves. The TS staff would be a crucial bridge between these oft-confusing transportation resources and the patients who need them.

- Second, designing an online transportation portal for the RideCare-PV staff and, ultimately, the public to help connect patients to transportation resources. For the TS staff, this portal would require limited access to information such as patient address and appointment details (time, location, frequency of appointments).

Additionally, the BeHealthy partnership proposed to convene a working group to provide guidance and advice to the project managers for the full 18-month duration of the project. This working group was to be comprised of multiple community stakeholders, medical facility representatives, and patient

advocates. To assess the impact of the various project interventions, the project included the Public Health Institute of Western Massachusetts (PHIWM) to assist with performance measure development, data collection, and program evaluation.

This pilot program was developed in relationship to the current healthcare models and workflows at partner healthcare providers (BH and CHC). Even though missed appointments due to transportation lead to a significant loss in revenue and negatively impacts the health of patients, there have not been systems in place from the healthcare providers' side that aim to address this issue directly. RideCare-PV presented the opportunity for these providers to actively tackle this issue by collaborating with multidisciplinary stakeholders including transportation-systems which would otherwise not communicate with each other. For a detailed explanation of the pre-pandemic plans for the project, see Appendix I.

Post-pandemic transition

In March 2020, four months into the project implementation, the COVID-19 pandemic led to the shutdown of in-person activities, including non-urgent in-person patient appointments at the health centers. Since routine in-person patient appointments, which were the focus of the pilot program, were on hold or significantly slowed down, the RideCare-PV project was put on hold.

The pandemic drastically changed how healthcare was functioning and being delivered. Patients were still dealing with pandemic related health issues and patient pools started to look different with interventions like telehealth. Since healthcare was primarily focusing on COVID-19 during the pandemic, it led to compounding effects for patients with other ailments that needed to be addressed[11] once the pandemic was not the priority. Alongside changes in healthcare delivery systems, post-pandemic, public transportation continued to be one of the "most disrupted sectors" with an increase in safety and hygiene concerns.[12]

At the end of January 2021, CHC was ready to move forward with the RideCare-PV project. Although the position was advertised publicly, CHC hired a TS from within their organization who started in April 2021. In the backdrop of the pandemic, a major need identified by CHC was a dedicated transportation service for patients. There was a need for patients, especially with higher needs, to be more encouraged to come for their doctor's visit in a way that alleviated some of their fear. In that direction, CHC decided to procure a dedicated van and merged the van service into their RideCare-PV program. Scheduling patients for the van service became the primary role of the TS.

During this same period, BH was still dealing with the aftermath of the pandemic. In February 2022, BH reached out to PVTA seeking transportation support for BeHealthy patients to have more easy access to COVID-19 vaccine clinics. PVTA saw this as an opportunity to bring RideCare-PV back into BH's radar and incorporate it in their current workflow to address some of the identified transportation challenges

[11] Pujolar. G., Oliver-Anglès A, Vargas I. & Vázquez M (2022), Int J Environ Res Public Health. 19(3): 1749.
[12] Gkiotsalitis, K. & Oded, C. (2021), Transport Reviews, 41(3): 374.

being faced by their most vulnerable patients. Further conversations led to the assignment of the Chief of the Division of General Medicine and Community Health to serve as BH's dedicated staff liaison into this project, which was instrumental in kick-starting RideCare-PV in a relatively bigger healthcare provider facility like BH. BH did not have the budget to procure what would possibly have needed to be several dedicated vans. After investigating the possible transportation options, the TS focused on scheduling MassHealth's PT-1 door-to-door non-emergency medical transportation for eligible patients and providing free transit passes to patients in partnership with the PVTA.

Once both TS programs were up and running, the RideCare-PV program was taken off hold. Given the effect of the pandemic, the differing context at the health centers, and the staggered start date of the transportation specialist, the program strategy at CHC and BH were different from originally planned and different from each other. These changes demanded that two different evaluations be designed and agreed on with the program staff, and considerable adjustments in the proposed metrics. The direction of the project was also influenced by adjustments in the main working group with staffing changes in most organizations involved in the project; all the new staff needed to be brought up to speed. The final evaluation plan was designed in the fall of 2022, and the period available for data collection was from April 2022 to end of March 2023. Throughout the project what did not change was the enthusiasm of the team to keep going despite setbacks and passionately contribute to the outcome of the project to the best of their ability.

Methods

Evaluation Design for both RideCare-PV Programs

When the project restarted in April 2022, the priority was on ensuring that the intervention itself was operationalized and running. Decisions around evaluation metrics and data collection tools were understandably a secondary consideration. When the evaluation team reconvened in the fall of 2022, some metrics from the original proposal were reconsidered after the two-year hiatus. For example, given an increase in telehealth appointments during the pandemic, the original measure of decreases in no-show rates could not be used because the 2019 rates were no longer a valid baseline. Other metrics were changed because the RideCare-PV program design changed significantly from what was proposed initially.

The goals and evaluation questions are the same for both RideCare-PV sites. Initially the evaluation plan developed in the fall of 2022 contained a unified list of measures. Given the significant differences between the two redesigned program strategies and the content of their data reports, the focus of inquiry differed between the two sites, and separate evaluation reports on findings, conclusions and recommendations at each site were written.

Goals and Evaluation Questions

The main goals of the evaluation were two-fold:

1) **Effectiveness:** To determine the effectiveness of the program in improving access to health services and satisfaction with those services for vulnerable patients who face transportation barriers.
2) **Process improvements:** To document what program staff learned on how to provide transportation services effectively and efficiently and what types of barriers affected implementation.

Accordingly, the two main evaluation questions are as follows:

1) **How effective has PVTA RideCare-PV been in improving access to health services for vulnerable patients who lack transportation?**

2) **How did the RideCare-PV intervention improve over time and what barriers remained?**

For a list of the metrics tied to these questions, please see Appendix II.

Data Sources

Patient Characteristics and Appointment Data

Baystate Health (BH) and Caring Health Center (CHC) provided HIPAA-compliant database reports based on de-identified Electronic Health Records (EHR) for analysis. Both sites collected the same data though

there was some variability because programs differed in terms of internal workflow and nature of intervention. The reports included:

1) **Patient characteristics**: age, legal sex, native language, race, and identification as Hispanic or Latino, type of insurance (CHC only)

2) **Appointment characteristics**: date and time of referral to the TS and of the appointment, site of appointment, appointment status: completed or cancelled, number of calls needed to set up the appointment (BH only), frequency of visits within reporting time window, status of PT-1 transportation approval (BH only), and text notes on the scheduling process and barriers faced by the patients or RideCare-PV staff (BH only), reasons for not accommodating a transportation need (CHC only)

3) **Milliman Advanced Risk Adjusters™ (MARA) scores (BH only):** The MARA[13] score calculates mortality risk based on prescription drug history and medical claims records as a way for health systems to assess potential care costs and health vulnerability of a patient. In this instance, MARA scores were used as a (gross) proxy for level of medical need.

Patient satisfaction surveys

Third party vendors administered the surveys for each provider via telephone interviews.[14] The questions were designed mainly by PHIWM staff initially based on the Consumer Assessment of Healthcare Providers and Systems (CAHPS) survey[15] with input from the entire RideCare-PV team, including the CHC survey vendor. For copies of the instruments see Appendixes III and IV. To see which items were different between the two surveys see Appendix V.

The CHC survey firm collected 165 responses in two rounds of data collection in November 2022 and March 2023, with 32 patients surveyed in both rounds. The response rates were 32% (96 of 299 responded) for round one and 54% (64 of 118 responded) for round two.

The BH survey firm only collected 10 responses – too few to draw any reliable conclusions on the questions. A second round conducted internally to try and increase the response rate yielded 12 responses from 79 patients known to have had contact with the TS. However, most responses were not applicable for the evaluation as the respondents stated that they had either never heard of the TS or been contacted by her. Eleven of 12 respondents reported that they would “like help” regarding transportation versus recognizing that they already had received help from the TS. As the response rate was low, findings from the original 10 respondents as well as additional details about the survey administration are presented as Appendix VI.

[13] https://www.ebms.com/what-is-a-mara-risk-score/#:~:text=The%20Milliman%20Advanced%20Risk%20Adjusters,to%20an%20average%20population%20risk.-

[14] Two phone calls were made for the Baystate survey and three for Caring Health. Only one CHC patient used an online form for submission.

[15] CAHPS Clinician & Group Survey, U.S. Agency for Healthcare Research and Quality, Rockville, MD.

Evaluation team notes on monthly check-ins

The qualitative data from monthly interviews with the TS and other members of the core team on what was learned and improved during this first year provide useful insights into how program processes were changed and improved, and the strengths and limitations of the service model at each site. See Appendix VII for the concepts that were covered in the monthly staff interviews.

Additional data sources

Due to the low response rate to the Patient Satisfaction survey, BH gathered additional information to understand the value added by the TS' services. The lead BH RideCare-PV official audited three charts of the most frequent users of the service and sent a four-question survey by email to the main providers of the frequent users of RideCare-PV service, receiving responses from about five patients (see Appendix VIII for interview guide).

Analysis

Before any analyses began, data were reviewed for quality, with the evaluator engaging in dialogue with BH, CHC or the survey vendors to clarify any confusions and ensure data were correct. Quantitative, coded, or categorized information on the Patient Characteristics and Appointments spreadsheet was analyzed using descriptive statistics (e.g., frequencies, means). The CHC survey vendor also provided a summary of findings that complemented the internal analyses. Qualitative data from open-ended notes in the database report (for BH) and notes from monthly meetings were analyzed using a thematic approach (e.g., looking for patterns in what was mentioned). A similar analytical approach was employed for examination of the qualitative data in the Patient Satisfaction survey.

Limitations

Limitations of the evaluation for both RideCare-PV programs

1) **The one-year timeframe only allows analysis of short-term results**. Results are preliminary given that these pilot programs spent half the year in start-up activities and then adjusting how the service was implemented. The evidence on effectiveness needs to be strengthened through a longer period of study of the more stable program models now in place as of April 2023.

2) **Analyses of increases or decreases in basic outcome measures such as no-shows were not possible.** When the evaluation team reconvened in the fall of 2022, some metrics from the original proposal were reconsidered after the 2-year hiatus. For example, given an increase in telehealth appointments during the pandemic, the original measure of decreases in no-show rates could not be used because the 2019 rates were no longer a valid baseline. There were gaps in the database reports and a lack of baseline statistics. The questions on the importance of the service in the ability to attend appointments and/or on whether attendance had improved were added to the patient satisfaction surveys as a way to address this change.

3) **Metrics needed to be revised over time.** As the program progressed, metrics needed to be rethought several times as the limitations of the available data became clearer.

Limitations of the evaluation for CHC

The evaluation of CHC's RideCare-PV program had a large enough number of appointments completed, patients served, and respondents to the patient satisfaction survey to have confidence in the conclusions, but with small numbers within certain demographic categories and missing data, it was not enough to conduct significance tests. Other limitations in the evaluation Include:

- It was challenging to analyze efficiency of the service given the complex process of communications between the providers, the transportation specialist, the patients, and the van driver to ensure attendance at a medical appointment. Most steps in this process are not recorded in the database, so it is unclear how or whether certain appointment scheduling processes improved over time. Relatedly, the database had no field on the number of calls needed for each appointment, so quantitative data on required level of staff effort is not available.
- Database reports in Excel on each appointment did not include reasons for no-shows and for a limited number of cancellations. The EHR vendor said that the field could not be added.
- It is not clear whether frequency of use of the transportation service is related to higher patient healthcare need or more happenstance of an open time slot or the patients' own initiative in seeking out the transportation service.

Limitations of the evaluation for BH

- There was an insufficient response rate and number of responses to the patient satisfaction survey (10 of 79 patients) to be able to draw any conclusions.
- Many adjustments were made to the data logged by the TS over time and some data on those served earlier in the year are missing. In addition, the data on appointment completion is incomplete as it was difficult for the TS to find.
- The data on the number of patients assisted with transportation is underestimated. While the focus of the evaluation was on the TS's help with PT-1 transportation to medical appointments, over time, more of the clinicians' Medical Assistants and Community Health Workers (CHWs) began to provide this service. In other words, more patients at BH were served through the larger program than are captured in this dataset.

Caring Health Center RideCare-PV Program

Program Description

Caring Health Center (CHC) delivers primary health, dental, behavioral health and substance use services at three primary and behavioral health care clinics in Springfield. CHC served over 20,000 patients in the greater Springfield area in 2022.[16] With their mission of eliminating health disparities and achieving health equity, their "comprehensive care aims to address the cultural, economic, and language needs" of their patients.[17] To enable more patients to reach their medical appointments conveniently, CHC provides free round-trip home-to-clinic van service on weekdays from 7:30 AM (first pick-up from home) to 4:00 PM (last drop-off at home) through the RideCare-PV program.[18] Initially, CHC staff reached out to patients with a history of no-shows, and then expanded the number of potential users of the service through provider referrals, and in some cases, use of social determinants of health screening[19]. The RideCare-PV staff include a coordinator, a full-time transportation specialist (TS), and a van driver. The van service has a maximum capacity of six round-trip rides each weekday.

Findings

The findings are broken into two sections: (1) RideCare-PV Client Characteristics which examines the demographic characteristics of the patients served and (2) Program Effectiveness and Process

[16] The estimate of the number of patients served was confirmed by a Caring Health administrator.
[17] https://caringhealth.org/about-caring-health-center/
[18] https://caringhealth.org/mychart/patient-transportation/
[19] The transportation question in the SDOH screening: "In the past 12 months, has lack of reliable transportation kept you from medical appointments, meetings, work or from getting things needed for daily living? "

Improvements which examines how effective the program was in serving clients, what was changed during the intervention period, and what barriers remain.

RideCare-PV Client Characteristics

Over the course of the year, the RideCare-PV van served 508 patients. See Table 1 for the demographic profile of patients served.

TABLE 1

Demographic Profile of RideCare-PV Patients

		#	%
Language	English	256	50%
	Spanish	173	34%
	Other Languages	79	16%
Sex	Female	319	63%
	Male	189	37%
Race	Black/African American[20]	132	34%
	White	209	54%
Ethnicity	Hispanic or Latino/a	264	57%
	Not Hispanic or Latino/a	197	43%
Age	17 or younger	87	17%
	18 to 24	12	2%
	25 to 34	35	7%
	35 to 44	55	11%
	45 to 54	75	15%
	55 to 64	124	25%
	65 and older	114	23%

[20] 122 patients for the question on race and 47 patients for ethnicity were registered as unknown or refused, so the denominator for these percentages was adjusted accordingly.

Title VI criteria and identification as Hispanic or Latino/a were set as metrics for the program's effectiveness in reaching vulnerable populations who experience health disparities. See Table 2 for the percent of patients from Title VI populations.

TABLE 2

Percent of RideCare-PV patients from Title VI populations

	#	%
National origin outside the US[21]	251	50%
Black Non-Hispanic	93	18%
Hispanic or Latino/a	264	52%

According to staff, those most in need of services include the elderly and parents with small children, as well as many patients living far from PVTA bus stops or with limited English-speaking ability. In the patient satisfaction survey, more than two-thirds of the respondents were on publicly funded insurance.

Program Effectiveness and Process Improvements

Findings 1 through 3 correspond to the first evaluation question: How effective has PVTA RideCare-PV been in improving access to and satisfaction with health services for vulnerable patients who lack transportation? To respond to the question, the evaluation analyzed whether appointments were completed successfully, no-shows and reasons for them, and relevant questions in the patient satisfaction survey. Findings 4 and 5 correspond to the second evaluation question: How did the RideCare-PV intervention improve over time and what barriers remained? To respond to that question, the evaluation analyzed what issues were addressed or still were challenges over the course of the year.

Finding 1: The RideCare-PV services were effective in addressing transportation barriers for a high number of patients.

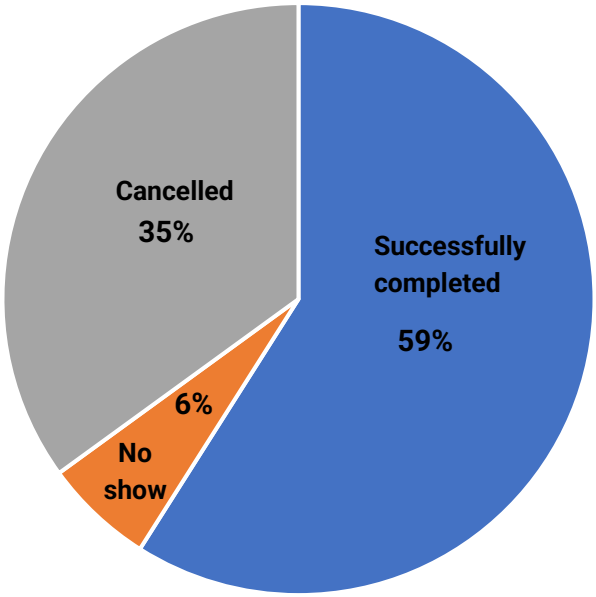
Between April 2022 and March 2023, there were 1,817 appointments made for patients referred to RideCare-PV services due to transportation barriers. Of these, the Transportation Specialist (TS) enabled 59% (1,064) to be completed and minimized no-shows to 6% (115) of all appointments as seen in Figure 1 below.

[21] Based on native language data.

The rate of increase in the numbers of people served over the year was notable, with 26 patients served in the first month (April 2022), and a total of 508 served by the end of the twelfth month (March 2023) (EHR database report). There was also a notable increase in the number of completed appointments over time as seen in Figure 2. The current capacity of the service is six round-trip rides a day, which includes patients living in towns outside of Springfield. More than 70% of patients used the service between one and three times, but the usage ranges from once to 43 times. Five percent of the patients used the service 12 or more times and account for 24% of appointments.

FIGURE 1

Outcome of Appointments Arranged by RideCare-PV

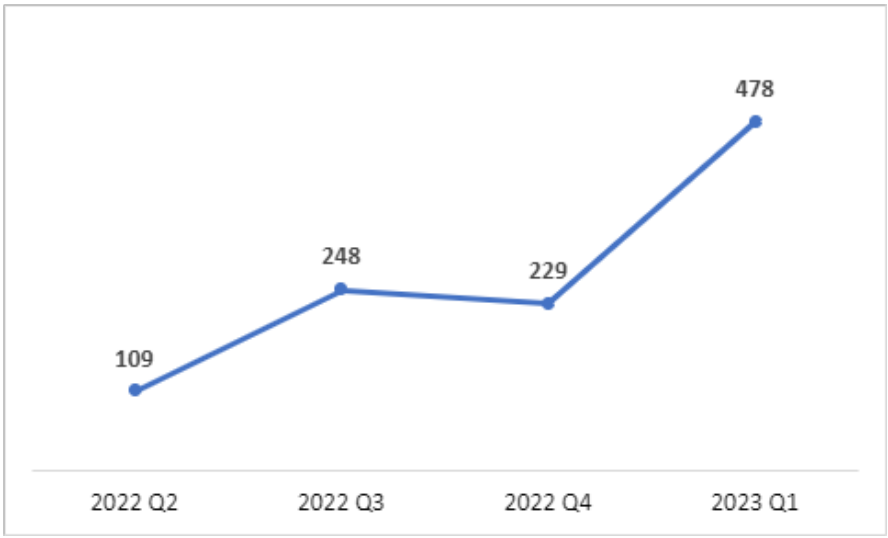


Of the 638 cancelled appointments, 181 (28%) were canceled by the provider and 290 (45%) by the patient. It is unclear whether the remaining 27% of cancelled appointments (which have reasons listed such as “error” (9%), “sickness” (6%), and “other” (6%)) could be re-classified as provider or patient cancellation. When these data were examined by ethnicity and race, sex, and age there were no major differences in rates of cancellation. For cancellations by the patients, there is no data on whether these were last-minute or whether they were rescheduled for some of the patients. Last-minute and non-rescheduled cancellations could have health consequences for the patient, while last-minute cancellations cost the clinic as much as no-shows. However, we also can interpret these cancellations (35% of total appointments) as an opportunity for the TS to help reschedule patients' transportation and healthcare appointments, as CHC now has a log of these cancellations. Without the TS tracking this information, following up with the patients would be hard.

The six percent no-show rate among RideCare-PV appointments suggests that the program is effectively addressing transportation barriers among the patients served. The annual rate of 19%[22] among the CHC general patient population is much higher.

FIGURE 2

Number of Completed Appointments Overtime



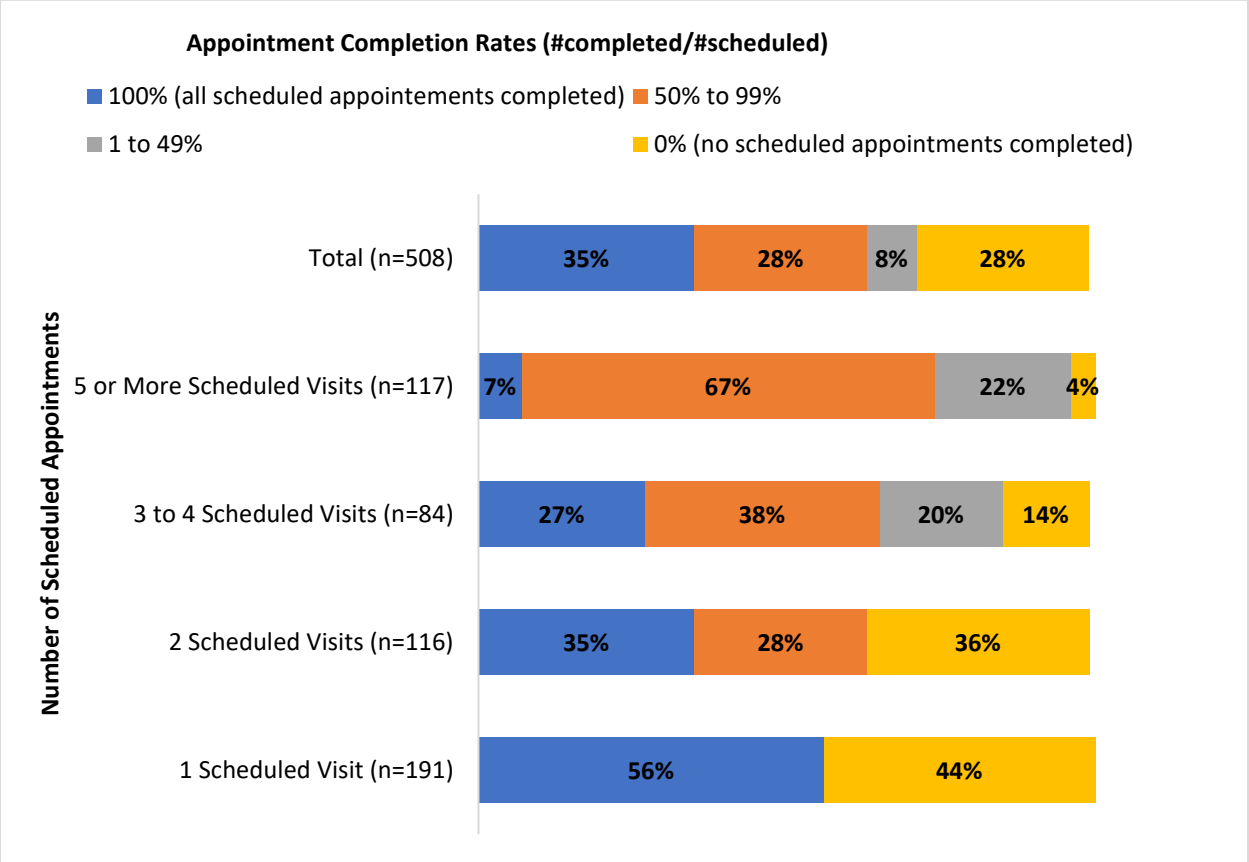
According to staff, a majority of the 115 no-shows are due to either the patient not showing up at the door or refusing the ride when the van arrived. The reasons for no-shows cited in the patient satisfaction survey were mainly communications snafus and late van arrivals. Staff cited other reasons, such as when the van arrives too late due to scheduling errors or traffic, cancellations of the ride or patient refusal of the ride due to illness or snow in the winter, cancellations when the patient is in crisis or sick, and other times when patients do not text or call to cancel a ride.

Given that there are a lot of legitimate or unclear reasons why there were cancellations or no shows and the onus for some numbers of cancellations are on the provider, there was hesitancy to show any completion rate analysis by patient. Also, if only one appointment is scheduled, there is a 50% chance that it will not be completed as compared to having 5 or more appointments where the odds of not completing the appointment decrease. Figure 3 shows a percentage completion rate per patient by number of appointments scheduled. These data hint that patients who had 5 or more appointments scheduled more frequently made their appointments as compared to the average total completion rate. Future data collection efforts would need to clarify and further categorize reasons for cancellations and no shows as patient, provider, or neither (e.g., snowstorm) and perhaps only compare patients with similar numbers of scheduled appointments to draw any solid conclusions.

[22] Email from Caring Health administrator, 5/31/23.

FIGURE 3

Appointment Completion by Number of Scheduled Visits per Patient



Finding 2: A high percentage (91%) of RideCare-PV users were satisfied with the services delivered.[23]

While the RideCare-PV program has been effective in preventing no-shows for these patients, the coordinator[24] states that the main purpose of the RideCare-PV program is to improve the quality of the experience for patients, reducing their stress due to transportation barriers and improving their satisfaction with CHC's services overall. Given this primary purpose, the program has been very successful. The average level of overall satisfaction was 91% and similarly high satisfaction was found among all the specific questions in the survey.[25]

Two rounds of the survey were planned to determine whether there were any changes in satisfaction as the program matured. The responses on different elements of satisfaction such as punctuality, courtesy and respect, intentions to keep using the service, and whether the respondent was likely to refer others to the service were similarly high in both rounds (Table 3). The percentage of respondents who ranked the service as "excellent" decreased slightly in the second round of surveying; however, because of the

[23] # of "good" and "excellent" responses on the general question about satisfaction with the service.

[24] Notes from interview with Caring Health administrator, May 25, 2023

[25] See the survey instrument and explanation of the survey methodology in the Methodology section and Appendix I.

small number of respondents, this should be interpreted with caution.

TABLE 3

Findings from the Patient Satisfaction Survey[26]

Response	Round 1 % of Respondents	Round 2 % of Respondents
Overall Satisfied ("excellent" & "good")	96%	
Van driver was "always" courteous	88%	
Van arrived 15-30 min late	4%	
Very likely to use service in the future	87%	
Very likely to refer others to the service	83%	
Would schedule fewer appointments if ride service did not exist	57%	
Ride service is "very important" in making it to an appointment	94%	

Also of note, more than half of RideCare-PV patients stated that they would be able to schedule fewer appointments if the service did not exist, and more than 90% highlighted the service's importance in making it to their appointments. As shown in Table 3, close to 60% of survey respondents would have scheduled fewer appointments had the van service not existed and over 90% viewed it as "very important" to making it to an appointment. This suggests the value of this service in patients' ability to schedule and show up for appointments.

Finding 3: Respondents to the Patient Satisfaction Survey appreciated the relationship with the driver and convenience of the RideCare-PV service but had some mixed responses to whether service was punctual.

The survey asked two important open-ended questions:

1) "***What do you like most about the CHC ride service***?" All but two out of 165 respondents answered this question. Four themes dominated the responses.
    a. 52 respondents focused on the <u>importance of the relationship with the driver,</u> such as:
        - *"They take their time, and the driver talks to me. Sometimes I am feeling down, and she asks how I am doing. She starts up a conversation with me to make me feel good."*

[26] See Appendix I: Additional Findings and Tables from the Patient Satisfaction Survey

b. 58 respondents praised the punctuality of the service. Several mentioned that punctuality relieves them of stress.
    - *"They arrive on time, and I am on time to my appointments. I do not have to worry about missing my appointments. I like that they are punctual."*
c. 47 respondents highlighted the convenience of the service, appreciating that the service is door-to-door. Several mentioned that they no longer had to walk to the clinic or take the bus.
d. Some described why the service is essential to get to appointments and maintain health, including one who lives in a rural town with no car or taxi service. The following quote describes how essential the service is for a person who uses a wheelchair:
    - *"I like everything! I have a power wheelchair and sometimes worry that I won't have enough charge to make it home. This shuttle is a great relief to me. ... I felt comfortable and safe. ... I have failed to take care of myself for a lack of transportation in the past."*

2) ***"Do you have any comments or suggestions to improve the service in the future?"*** This question elicited fewer responses, but even 17 patients whose overall level of satisfaction was "excellent" described incidents where all did not go well. Comments included trouble getting through on the phone, late and missed van rides, arriving late to an appointment, scheduling problems, and communication errors about appointment time. CHC's recent inability to hire a back-up driver and the increased demand for the service account for many of the March 2023 comments.
    - *"There was another passenger and the ride was late to pick me up, making me late for my appointment... The timing has to get better."*
    - *"The driver was late picking me up one of the times because they were picking someone else up. I called many times and was told they were full for one of my appointments"*

Finding 4: The demand for services has begun to outstrip the supply, and there remains a significant unmet need for RideCare-PV services.

The number of patients using the RideCare-PV service steadily increased throughout the year, so that by the last four months of the year, staff reported that the demand for rides was exceeding the supply and more patients have not had their transportation needs met due to lack of capacity in the van schedule. At times, a provider-made appointment had to be rescheduled to a day when van service was available.

Two months of tracking (Feb-March) identified 34 patients who could not be scheduled due to van availability. Twenty (59%) of these patients followed the scheduling guideline and requested the service three to nine weekdays in advance, but still could not be served.

The Social Determinants of Health (SDOH) screening between April 2022 and March 2023 identified 1,263 patients with transportation barriers, suggesting that RideCare-PV currently serves 40% of patients in need. Anecdotes from staff interviews and notes in the patient survey describe patients using alternatives such as rides from family and friends, buses, and walking to get to their appointments.

The six round-trip limit per day has led to the inability to serve some patients as demand for the service exceeds supply. Two other structural elements in the RideCare-PV service pose a barrier to its use for some patients.

- First, the van service ends at 4:00 PM, so that RideCare-PV patients cannot book appointments for later than 2:30 PM. CHC adapted by rescheduling some appointments within the operating hours.
- Second, scheduling three days in advance is requested, and usually last-minute or urgent requests cannot be met. Two anecdotes in the patient survey describe last-minute appeals for a ride that were met, but these seem to be the exception.

Finding 5: While the CHC RideCare-PV team were committed to continuous process improvement to optimize the operation of the program, challenges related to the complexity of running a van service could only be partially solved.[27]

Before the program started, the CHC RideCare-PV staff and PVTA agreed on an evaluation plan that included a "Plan-Do-Study-Act" iterative process.[28] When the current RideCare-PV coordinator assumed her post three months after the project began, she implemented a similar planning, implementation and evaluation cycle, and this process was preserved both internally and with the evaluation team. On her arrival, she found that there were no standard operating procedures and guidelines for the service, and developed a manual, which is constantly updated as unforeseen issues arise.

In every monthly interview, staff at CHC described the adjustments that they made to provide transportation services to as many patients in need as possible. Their active efforts to improve the complex process of scheduling the van service enabled them to increase the number of patients served.

The challenges below related to geography, communications, and scheduling make the RideCare-PV program time-consuming and difficult to implement. These challenges also determined how many round-trip rides could be scheduled each day.

1) Geography: CHC serves the geographically spread-out area of Greater Springfield. Juggling the schedule of provider-made appointments with the location of each patients' home made it almost impossible to optimize the use of the van. The staff and the evaluation team explored the potential of mapping/scheduling transportation software to resolve this issue but found that most IT solutions were too expensive and geared to much larger programs. Currently, the RideCare-PV team gives the van's routes and capacity priority over scheduled appointments and reschedules.
2) Communications requirements made the program time-consuming and difficult to implement: Meeting notes describe the need for many communications between the TS, the providers, the van driver, and the patients to achieve a completed medical appointment. On average five phone calls are necessary. The driver must rely on a CHC cellphone for calls to clinics and

[27] The source for this finding is analysis of the staff meeting notes.
[28] https://www.ihi.org/resources/Pages/Tools/PlanDoStudyActWorksheet.aspx

patients during the day, leading to patients calling the driver instead of the TS to schedule new appointments.

3) Scheduling is complex because the TS must juggle the appointments made by providers for RideCare-PV clients within the time frame of three roundtrips in the AM and three in the PM, taking geography and most efficient routes into account. To increase efficiency, when the TS saw that a patient has multiple appointments to be scheduled, she scheduled them all at once.

Discussion

The RideCare-PV program has been successful in addressing transportation barriers for a considerable number of vulnerable patients. Given the challenges and complexity of running a new van service over the extensive geographic area of Greater Springfield, CHC staff rose to the occasion, serving 508 patients in need of transportation.

The no-show rate of 6% for RideCare-PV patients is much lower than the no-show rate of 19% for the general CHC patient population, suggesting that the program is effective in avoiding no-shows for most of the patients who participate.

Patient satisfaction is high. With a 91% overall satisfaction rate, patients especially appreciate the courtesy and friendliness of the driver, the punctuality of the service, and the convenience of having door-to-door free-of-charge service for their medical appointments.

Scheduling door-to-door round-trip van services remains challenging. Staff continually adjusted their processes to meet these challenges and enable more patients to be served. The data show numerous examples of unforeseen circumstances that demanded an instant response from RideCare-PV staff. Some scheduling errors were inevitable, but the patient satisfaction survey suggests that these were rare. Software solutions were found to be costly and more suited to larger programs.

Demand for the service has risen and has begun to exceed the capacity of the service. Word-of-mouth from patients and providers' referrals have led to steady increases in demand for this highly valued service. By March 2023, the demand for RideCare-PV services was rising faster than CHC's ability to accommodate all requests. Recent CHC screening for SDOH suggests that there is still significant unmet need for transportation among CHC patients. 1,263 patients with transportation barriers were identified, and RideCare-PV serves 40% (508) of that number.

Recommendations

Increase the number of patients in need referred to the RideCare-PV Program.

- Conduct outreach to the patients who indicated the need for transportation in the SDOH screening and who are not current RideCare-PV clients. An initial conversation could determine their need for the van service and result in a referral.
- Develop automatic systems for referral to the transportation specialist when new SDOH screenings indicate need.

Make additional investments to address the remaining unmet need for transportation among CHC patients, and other challenges in the current program. RideCare-PV staff have identified investments that would accommodate the rising demand for services, facilitate same-day communications with the driver, and improve the efficiency of the van's mapping and scheduling process. The main recommended investments are:

- Hiring a second driver for a second van that CHC already owns. Besides accommodating increased demand, having another van would make the mapping of rides easier and more efficient. Options under discussion include having one van do all pick-ups and the other returns, dividing their routes by geographical area, or staggering schedules to accommodate later drop-off times. However, the coordinator noted that expanding the service also means increasing the liability insurance which in addition to being an additional expense, may come with other requirements.
- A HIPAA-compliant radio dispatch service and automatic text reminders to facilitate communications between the driver, Ride-Care staff, and patients. The program could experiment with automatic texts, with flags for phone calls when patients do not respond with a confirmation. A radio dispatch service would simplify communications and make them safer for the driver.
- Explore the options for investment in tailored ride coordination software to reduce the complexity of scheduling rides.

Investigate the option of making greater use of other existing transportation alternatives. PVTA bus passes, PVTA Paratransit, and MassHealth PT-1 transportation services could be offered to patients when the van service cannot accommodate them for some reason.

Develop EHR reports that facilitate analysis of the impact on patients' health when their transportation needs are met. It is unclear whether the EHR reports could be organized by patient versus appointment. However, being able to see a patient's record over time might help us better understand the outcomes of transportation interventions.

Develop automatic systems to flag and investigate reasons for no-shows and last-minute cancellations. This would be important for equity reasons – to understand whether any of these could have been preventable by individualizing services to patients with multiple challenges. Developing a set of answer options in addition to an open text field to explain the reasons for no-shows or cancellations should be added.

Baystate Health RideCare-PV Program

Program description

Baystate Health (BH) is a not-for-profit healthcare organization serving more than 800,000 people in the Pioneer Valley of Western Massachusetts. The RideCare-PV program serves the three BH Community Health Centers[29] with a total of 26,000 unique patients served per year in the greater Springfield area, including referrals to appointments at the main hospital and other hospitals. RideCare-PV at BH focused on addressing the transportation barriers of seniors, individuals with disabilities and low-income patients on MassHealth's Medicaid insurance by facilitating the use of MassHealth's PT-1 non-emergency and free-of-charge medical van services. [30] The RideCare-PV Program's main investment at BH is support for a bilingual (Spanish & English) transportation specialist (TS) who works full-time to help patients use the PT-1 van service with MART – the PT-1 scheduling platform. In the year from April 2022 - March 2023, the specialist directly served 79 patients.

TABLE 4

Demographic Profile of RideCare-PV Patients

		#	%
National Origin	National origin outside US	40	50%
Sex	Female	44	56%
	Male	31	39%
Race	Black/African American[1]	14	22%
Ethnicity	Hispanic or Latino/a	57	76%
Age	17 or younger	12	15%
	18 to 24	3	4%
	25 to 34	5	6%
	35 to 44	11	14%
	45 to 54	20	25%
	55 to 64	26	33%
	65	2	3%

Findings

The findings are broken into two sections: (1) RideCare-PV Client Characteristics which

[29] The three CHCs are Baystate Brightwood Health Center – Centro de Salud with around 8K patients, Baystate High Street Health Center/Adult and Pediatrics with around 8K, and Baystate Mason Square Neighborhood Health Center adult and pediatrics with 10K. High Street and Mason Square offer midwifery services.

[30] https://www.mass.gov/masshealth-transportation-information-for-providers

examines the demographic characteristics of the patients served and (2) Program Effectiveness and Process Improvements which examines how effective the program was in serving clients, what was changed during the intervention period, and what barriers remain.

RideCare-PV Client Characteristics

The evidence that follows confirms that the program serves a population who experiences health inequities as well as high risk due to their level of illness. All patients served are low-income since they all qualify for Medicaid/MassHealth insurance. The demographic profile of these patients is in Table 4, including the Title VI measures of national origin outside the US, race, and ethnicity. Only two patients were over age 65.

According to the 2020 census, 48% of Springfield's population is Hispanic/Latino – a population who experiences health inequities.[31] With 76% of RideCare-PV patients from this population, the program seems to have been especially effective in reaching them.

MARA risk score: The MARA tool uses each member's medical and prescription drug claim history to predict an individual's relative healthcare cost risk, as compared to an average population risk. The MARA risk score is recorded for 68 RideCare-PV patients. As Table 5 reveals, the RideCare-PV Program is serving patients at high risk. Almost a quarter of the patients served have the highest risk scores of greater than 10, followed by 47% of those with medium to high scores.

TABLE 5

MARA Risk Scores of RideCare-PV Patients

MARA Scores	#	%
<1	6	9%
1 or 2	14	21%
3 through 10	32	47%
>10	16	24%

Note: 11 patients' MARA Scores were blank. The percentages shown are out of the 68 patients who did have MARA Scores.

Program Effectiveness and Process Improvements

Findings 1 through 4 correspond to the first evaluation question: How effective has PVTA RideCare-PV been in improving access to and satisfaction with health services for vulnerable patients who lack transportation? To respond to the question, the evaluation analyzed what groups were best served by the intervention, successful appointment completions, and satisfaction with services. Findings 5 and 6 respond to the second evaluation question: How did the RideCare-PV intervention improve over time

[31] Public Health Institute of Western MA 2019: *Springfield Health Equity Report.* https://www.publichealthwm.org/news-events/general-news/2019-springfield-health-equity-report

and what barriers remained? To respond to that question, the evaluation analyzed what issues were addressed or still were challenges over the course of the year.

Finding 1: The program mostly served vulnerable and high-risk patients who experience health disparities.

Seventy-five percent (59) of the patients served only used the transportation service one-to-two times. The bulk of the TS's efforts are directed to 25% (20) of the patients who were the most ill and/or the most unable to interact with the PT-1 system. The data on MARA scores confirms that the sickest and most vulnerable patients consume most of the TS's efforts and time. As seen in Table 5, 16 out of the 20 who needed the most assistance had MARA scores greater than 10 and needed an average of four contacts by the Transportation Specialist (TS) per appointment; those with lower scores averaged around three contacts. Four patients called the TS at least once a month, and one patient was helped to get to 61 appointments during the year.[32] Other qualitative data reveal how much staff effort (and cost) is incurred to keep these most vulnerable patients stable and out of the hospital.

"It is essential that [xxx] has transportation to her medical appointments. She has a history of Diabetes type II and Hypertension, as well as MDD, PTSD and anxiety. She has poor health literacy and relies on support from a Case manager as well as the CHWs through her insurance to help schedule her appointments and navigate the health system. If she did not have transportation to her appointments, I do not think she would be able to use public transportation to get to the health center, and do not think she would follow-up as often as she needs to manage her chronic medical conditions. She used to miss appointments intermittently prior to getting the support she now has in place, and her DM has been better controlled in the last year as a result. I think her HTN and DM control would worsen if she lost the transportation services she has in place. She would likely attempt to convert her appointments to Telehealth, but it would not be very effective as she cannot reliably relay information about her glycemic control or blood pressures."

-Provider

Every staff interview throughout the year highlighted one or more instances of the concerted staff effort that it took to achieve a successful outcome. Additional qualitative data from TS notes in the database report, and provider responses in an email survey[33] reinforce this picture of the most frequent users. TS notes describe patients who are less organized, do not always remember their appointments, or less likely to answer their phones. The TS also reports frequent users who are parents with more than one child who need to get to pediatric appointments, and others who are fearful of buses or cannot take

[32] The TS worked with the patient to find alternatives that would use less of her time.

[33] See Appendix 4: Responses from Five Providers on the Importance of the RideCare-PV program

them due to distance from a bus stop or a disability.

The three chart audits and provider accounts described patients with multiple health conditions who require frequent monitoring and visits with primary care and specialists. The providers agreed that the service is essential to manage these patients' severe illness and keep them out of the hospital (see Appendix IX for providers' accounts).

Table 6 below shows the outcome metrics of BH's TS intervention. Providers referred 79 patients to the TS, who contacted them all. According to the TS, all the 79 patients helped were approved for PT-1 services, although some specific appointments were initially denied, and then approved after appeal. Since the providers' staff makes the initial approval request to MassHealth and provide patients with information on PT-1, an unknown number of other patients were also assisted by Community Health Workers (CHWs) and Medical Assistants to gain access to PT-1 service. In addition, less than 100 patients were provided with bus passes for unexpected needs for transportation, but this intervention was not tracked.

TABLE 6

Results of Outcome Metrics[34]

Metric	#	%
Patients referred to and contacted by the Transportation Specialist		100%
RideCare-PV patients covered by Medicaid who are helped by the TS to qualify for subsidized transportation (PT1, PVTA vans)	79	100%
Total appointments made	257	100%
Appointments successfully completed by patients who are identified as needing transportation	139	54%
No show appointments	19	7%
Unknown outcome	99	39%

[34] These measures are sources from an Excel report with de-identified HIPAA-compliant data from the electronic health records (EHR) of RideCare-PV clients from April 1, 2022 to March 31, 2023. The TS added a notes field which gave additional details about staff efforts to contact the patients, providers and MART for scheduled appointments.

Finding 2: More than half (54%) of the appointments arranged by the TS were successfully completed.

Out of the 257 appointments that the TS helped to arrange, more than half (54%; n =139) were successfully completed, and 7% of the appointments resulted in no-shows – a much lower percent than the 20% norm for the whole patient population in 2019. Thirty-nine percent of the appointments had no attendance data reported. These results nevertheless suggest a high level of effectiveness of the RideCare-PV program since 88% of the appointments with data available were successfully completed. Additionally, of the 19 no-shows, the appointment notes reveal that seven of them were due to errors made by MART schedulers or the PT1 driver.

Finding 3: It is unclear whether patients were satisfied with the services delivered by the TS.

The low response rate to the survey makes it difficult to understand whether patients were satisfied with the service or not. Two rounds of surveys were conducted to elicit patient's feedback and satisfaction with the RideCare-PV program. However, of the sample of 55 contacts made by the survey personnel in the main round of the survey conducted in January 2023, only 10 responses were received. Although these responses are very positive, the number responding is too low to have confidence in the result. In the later round of surveys conducted in March 2023 to complement the first round, 11 out of 12 respondents did not recall any interaction with the TS and indicated that they would appreciate receiving assistance with transportation. See Appendix VI for the survey instrument and more details on the responses.

The most likely explanation for this finding is that the low visibility of the TS's behind-the-scenes efforts to help patients use PT-1 service led to low recognition of the specialist's role. For most patients, the most visible aspect of RideCare-PV assistance is the PT-1 van and driver. The TS offered two additional comments: 1) given the high number of calls from BH offices received by many RideCare-PV patients, they probably do not remember her. She usually must reintroduce herself in each call, and 2) many in the community will either refuse or not answer a call from an unknown number.

Finding 4: Gaps in the BH EHR reporting system made it difficult to evaluate whether patient transportation needs were met in 99 (39%) of the appointments.

Since information is missing on 39% of the appointments, definitive statements on effectiveness of the RideCare-PV program are not possible. The BH EHR reporting system that the TS had access to[35] does not automatically report no-shows or appointment completion. Before the evaluation was designed in the fall of 2022, the TS did not track appointment completion, and the EHR system yielded little information. In multiple interviews, she described time-consuming and often unsuccessful efforts to

[35] The TS did not have access to the REDCap EHR software, which might have made it easier to collect this information.

track appointments completed and no-shows for patients she serves from several different sources. At times, she resorted to calling the provider's staff to find out if a patient made it to an appointment. In the data report under "attendance," rescheduled appointments either show "no" or are blank under attendance.

Finding 5: The total number of patients referred to the program was low given the total patient population at BH.

The total number of patients referred to the RideCare-PV program was low compared to the 26,000 unique patients served annually at the three BH clinics in the RideCare-PV program. Based on a Social Determinants of Health (SDOH) screener conducted in 2021 and 2022 by BH, 3,031 individuals identified transportation as a need, with 660 stating they wanted help connecting to transportation resources.[36] Given that only 79 patients were referred for transportation services, this suggests there remains unmet need.

Explanations offered by BH staff point to several factors. First, only MassHealth members going to a MassHealth covered service and unable to access public or private transportation may be eligible for the PT-1 non-emergency transportation. Some patients do not meet the PT-1 eligibility criteria because they have other transportation options.

Second, screening patients for transportation needs is not automatic, and a records search determined that SDOH screening codes are mainly absent from the BH medical records.[37] Without this screening, there is no referral to the RideCare-PV program unless a patient or provider happens to request it. In such a large medical care system, initial communications on RideCare-PV by the TS were not sufficient to result in a standard practice of referrals to RideCare-PV by providers at the three clinics. The number of providers using the referral mechanism to RideCare-PV on a regular basis grew slowly. Three CHWs referred patients to the TS more than 12 times in the year. Sixty-one appointments were made by patients or their families calling the TS directly, probably after having been referred by a provider initially. This lack of screening means that there is no reliable estimate of the unmet need for transportation among the patient population of these BH clinics.

In three different meetings, RideCare-PV team members pointed out that the teaching hospital and associated Community Health Centers experience high turnover among interns and students who are assigned to the clinics. Additional turnover and staff shortages occurred during the pandemic as many health care providers retired. Given the turnover in providers and the burdens on remaining staff due to staff shortages, it has been difficult to increase their awareness and use of the RideCare-PV services.

[36] Email from Chief of General Medical and Community Health, March 23, 2023. SDOH Screener, 2021-2022.
[37] Email from Chief of General Medical and Community Health , March 23, 2023.

Finding 6: The structure of MassHealth's PT-1 van service leads to difficulties in addressing the transportation needs of some patients.

While the RideCare-PV Program gives patients access to a transportation service that is free of charge, sustainable, and deals well with appointments scheduled far enough in advance, the structure of MassHealth's PT-1 van service leads to difficulties in addressing the transportation needs of some patients. These include patients with urgent needs, those not covered by MassHealth insurance and those who need a stretcher. Nevertheless, there are three important advantages to BH RideCare-PV strategy of helping patients qualify for and use the MassHealth PT-1 van service.

1. The service is free of charge to MassHealth patients, who also tend to be a more vulnerable population.
2. Some MassHealth patients have been able to use the PT-1 van service on their own once they are familiar with the system. For infrequent or regularly scheduled medical visits, these patients can arrange rides a week or more in advance with a minimum of time and stress.
3. The PT-1 service is built into the MassHealth budget, and therefore is more financially sustainable than a clinic-run van service.

The evaluation analyzed equity issues by identifying transportation barriers that the program model could not address, and the profile of patients RideCare-PV could not serve. These barriers mainly stem from the limitations of the PT-1 van service.

Examples of patients whose transportation needs cannot be met:

- Those with urgent needs:
    - Those with a semi-urgent medical problem who cannot afford to wait to get approved for PT-1 service.
    - Those needing same-day service. This is available on some days but is not guaranteed. If available, the wait is at least 90 minutes.
- Those not covered by MassHealth insurance.
- Those who are bed-ridden and need a stretcher. Neither PT-1 nor local ambulance services can bring these patients to a clinic appointment

PVTA public transportation services are an alternative to PT-1 Services, but also pose barriers for some in need:

- PVTA also provides ADA paratransit van service for people with disabilities and for seniors, but the service is not focused on medical visits, so availability is limited unless scheduling far in advance. Furthermore, for some patients the $6 round-trip fee is a barrier.

- The PVTA buses are an alternative for many patients, except for those living too far from a bus stop, or when the bus schedule is inconvenient for their appointment time. Although the bus only costs $3 round-trip, this is a barrier for some who are financially stressed or have little access to cash. The free bus passes available at the clinics are limited, and a patient needs to get to the clinic to get a pass for the ride home.

Also, the **process of arranging PT-1 Service was reported to be stressful for patients**. The original theory of the BH RideCare-PV program was that the TS would reduce the stress of making an appointment through MART for a PT-1 ride. Mass Health's PT-1 service is designed so that patients can use it on their own either with a phone call to MART or online/in an app. However, in practice many patients need help with coordinating their rides. Numerous sources[38] verify that patients often find it challenging and stressful to interact with MART; these patients are the most frequent users of the TS's services.

Patients who have access to and are comfortable with online or app scheduling and who are relatively well-organized are most apt to be able to use PT-1 on their own, so long as they remember to call at least three days in advance. Even though many patients succeeded in using the PT-1 van service after an initial orientation by the TS or a CHW, meeting notes reveal numerous anecdotes of unforeseen circumstances when the TS needed to intervene.

> "*Someone today arranged a ride to the hospital, but the surgery was canceled. She was there early, so called MART at 8 AM for a ride back home. Their earliest possible ride was 9:30, so she arranged for a Lyft, but then the Lyft did not come." (1/24 meeting notes)*
>
> *"A few have "graduated" and set up their rides on their own. But one came back because she had trouble remembering what time the ride was set up for. She tends to be anxious and to panic." (2/24 meeting notes)*

The process of helping patients use the PT-1 service is often time-consuming and at times stressful for the TS as well. When patients need TS help for scheduling, the entire process can take up anywhere from one to ten phone calls, with an average of four calls per appointment, and involve calls to provider staff, MART and the patient. For a full description of the process followed by the TS see Appendix X.

The following specific challenges with use of the PT-1 service were identified.

1. Communication difficulties:
    - When patients call, they often do not get through. "On the Spanish line you must wait even longer. Monday and Fridays are particularly busy days." (12/15 notes).
    - Although MART offers the option to be called back, both the TS and several patients report that they never received the call back (5/31 interview notes)

[38] TS notes in the database report and several staff meeting notes about experiences with MART and PT-1

- MART does not communicate with the TS or the provider if they cancel the ride or the patient does not show up for the ride.
- Patients calling MART always reach a different person and report varied levels of courtesy and responsiveness.
- Not all PT-1 drivers have adequate Spanish language skills.

2. Inefficiencies:

   - A new request for approval needs to be made for each ride unless the provider is scheduling a "standing order," which has a very strict definition: several regular appointments to the same clinic address on the same day of the week and the same hour. Therefore, scheduling with MART is time-consuming when a patient has multiple appointments that do not fit this definition. (5/31 interview notes)
   - Synchronization of data between MassHealth and MART on approvals and address changes can fail on occasion and is often delayed. Seven incidents are documented in TS notes that resulted in no-shows, including MART having the wrong address for the patient, showing up too late for the patient to take them to the appointment, or taking them to the wrong clinic.
   - Online appointments take longer to schedule because MART needs to verify approval from MassHealth. For this reason, the TS always calls so that the MART person can check for the MassHealth approval immediately.

Discussion

It is challenging for a large provider such as BH serving over 800,000 patients to start a new, unique service or program. The beginning stages of this project happened under abnormal conditions. The project was restarted suddenly while BH was still suffering from disruption and staffing shortages due to the COVID-19 pandemic. It is remarkable that the BH team was able to launch this effort. However, the consequence of these other disruptive factors and challenges meant that neither adequate referral systems nor software training and access for the TS were in place. Although initial results show that the program was highly effective for the vulnerable patients directly served, their numbers are too low to draw definitive conclusions.

The RideCare-PV program at BH has been effective in helping the patients served to overcome their transportation barriers and make it to their appointments. For the 158 appointments with attendance data, 88% were completed successfully, and only 12% were no-shows. This compares favorably with the current 20% no-show rate among the patient population of BH's BeHealthy clinics. The 158 appointments does not include the rescheduled appointments because we do not know whether the patients eventually made it to their appointments.

The transportation specialist's intervention helped to keep some patients who were severely or chronically ill stable and out of the hospital. Other patients who have the highest need for her services

include mothers with two or more children and others with diverse barriers to use of PT-1 or PVTA public transit on their own.

There was a lack of automatic tracking and referral of no-shows at BH. The lack was revealed through gaps in the database reports on appointments. The TS often had to consult three different sources to get the necessary information, possibly due to lack of access to the EHR platform.

The awareness of the RideCare-PV program and transportation specialist's service is low. The low number of referrals by providers to RideCare-PV can be explained by the lack of automatic SDOH screening and referral systems. Currently, referrals are dependent on the providers' initiative, and awareness of the service is low given staff shortages and the turnover of auxiliary staff or providers in a large medical care system linked to a teaching hospital.

Numerous challenges related to the structure of MassHealth's PT-1 non-emergency transportation services were identified, leading to inefficiencies and stress for patients, providers, and the TS. The RideCare-PV program's success for their patients was achieved despite these issues.

The methodology in the patient satisfaction survey did not work well in the communities served and led to the lack of patient perspectives in the evaluation. An email followed by two phone calls elicited only 10 responses out of the sample of 55. The TS hypothesized that this was due to the low visibility of the specialist's assistance and reluctance to answer the phone from unknown numbers.

Recommendations

BH organizational recommendations

The RideCare-PV program proved to be an effective transportation intervention for a limited number of patients. As BH considers transitioning the program from its pilot phase to a permanent program, the findings suggest recommendations to expand the reach of the program and reduce inefficiencies.

Continue to advertise the role and support the transportation specialist. BH can increase the awareness of the program to ensure it reaches patients who need help with transportation. In addition, the TS position provides essential assistance to the most vulnerable patients and adequate support, training and software/system access should be provided for the role. Some of the recommendations below would enable them to serve a larger number of patients.

Establish systems that automatically prompt providers and their staff to ask about SDOH and refer to the transportation specialist if needed. BH's new ACO contract with MassHealth includes a requirement to address social determinants of health (SDOH); therefore, the low rates of screening patients for SDOH during the year ending March 2023 might not reflect current practice. It would also be beneficial to add an SDOH checklist to complex case conferences as well as transition teams for people discharged. Once this system is in place, BH will be able to determine the level of unmet need for transportation and increase the number of patients served by the TS.

Enable easier tracking from the point of scheduling an appointment to patients' attendance. At a minimum, BH could implement automatic alerts for no-shows in the EHR system to all relevant staff, which would enable follow-up with the patients, and automatic referrals to TS if lack of transportation was a cause.

Experiment with methods to gather patient satisfaction data for the transportation services. Suggestions include immediate follow-up calls or texts after the appointment, ensuring that the phone ID shows that the call is coming from a BH doctor's office, and when possible, in-person interviews.

Conduct economic research to identify the costs to the BH system and to patients' health of no-shows and cancellation of appointments due to transportation barriers. The research should conduct a more comprehensive SDOH needs assessment, including need for transportation. Although the most vulnerable patients with chronic conditions incur high costs in RideCare-PV staff time, this cost needs to be compared to the cost to the medical system and to the patient of their conditions becoming more acute due to missed appointments.

Recommendations for BH cooperation with other Institutions

Work with PVTA to expand and track the availability of PVTA bus passes for patients who have unforeseen needs for a ride home or for whom the fare is a financial hardship.[39]

Work with PVTA to enable reduced fare or free use of the ADA Paratransit and senior van services for patients with financial hardship.

Work with MassHealth to make the PT-1 service more user friendly and efficient. Specific suggestions include:

- Eliminate the requirement to get separate approvals for routine or repeat appointments.
- Enable automatic communications with providers and patients when drivers are late or when other errors mean the patients cannot get to their appointments.
- Study and improve wait times and call-back services for people calling MART, especially for the Spanish-speaking line.
- Determine and fix the synchronization lapses between MassHealth and MART on patient data, especially addresses.

[39] The one-way fare is $1.50 for an adult, but meeting notes have a few anecdotes of patients saying this is a barrier.

Lessons Learned

Although the two RideCare-PV programs followed different strategies, they shared the goal of reducing health inequities and risks among vulnerable populations by removing barriers to transportation to health care appointments. Two lessons for similar programs emerge from these pilot experiences.

First, many people with severe, chronic, or multiple illnesses need concerted efforts on the part of the health system to improve their health or at least keep them stable and out of the emergency room. Accounts from leaders of both RideCare-PV programs paint a picture of the frequent users of RideCare-PV who consume the most effort by staff. These patients have one or more of the following challenges: they may be less organized and not able to schedule transport in advance, unable to read the mail or use online resources, have trouble interacting with a person at a call center, be afraid to use public transportation, have trouble keeping track of appointments, and not answer the phone reliably or remember what has been said on a call. In one documented case, it took as many as ten calls and active internal problem-solving to succeed in getting a patient to a crucial appointment. In the Baystate Health (BH) program, 25% of those served consumed the bulk of the transportation specialist's time, and they tended to suffer from the highest health risks. At Caring Health Center (CHC), five percent of the patients accounted for 24.4% of van appointments. The lesson for similar programs is that when lack of transportation is the main barrier to a patient attending appointments, up to 50% or more of higher functioning patients who need transportation can be served with a minimum of staff effort. For others, however, heroic efforts to meet a patient's transportation need are often necessary. Transportation service for the most high-risk patients takes staff time and should be adequately funded. Reducing health disparities for the most vulnerable patients is unavoidably costly.

Second, running a door-to-door round-trip van service is a complex undertaking, especially when a van picks up and drops off multiple patients. Caring Health staff vividly described the challenges of mapping van routes efficiently given far-flung locations of some homes, fixed medical appointment times, and unforeseen circumstances such as traffic. The challenges facing MassHealth's PT-1 van service were also demonstrated in anecdotes of when things went wrong, such as patients not being able to get through on the phone, vans arriving late or not at all, outdated addresses in the system, or being brought to the wrong clinic. Comparing the two experiences, one could conclude that clinic-based van service can serve more patients more efficiently. However, adjustments to MassHealth's PT-1 van service to make it more flexible and user-friendly could minimize inefficiencies and expand their reach to many more Pioneer Valley patients.

Conclusions

The RideCare- Pioneer Valley project set out to connect vulnerable patients to transportation options to improve health outcomes and reduce health inequities and financial waste in the BeHealthy partnership in the greater Springfield, Massachusetts (MA) area. To achieve the goal, two transportation specialists (TS) were hired to support patients and health providers at Baystate Health (BH) and Caring Health Center (CHC) to assist with scheduling rides for patient's appointment.

Although the project was interrupted by pandemic, leading to a hold, both programs eventually took off and involved the TS scheduling patients with transportation needs for their appointment on healthcare-specific free door-to-door van services– an in-house operated van service at CHC and a state-run van service (PT-1) at BH. Both programs were evaluated despite limitations in the program delivery and data collection efforts. Though the results are preliminary, the evaluation, based on specific assessment metrics revealed both programs were effective in improving access to health services for vulnerable patients who face transportation barriers. In addition, the project for the first time allowed healthcare providers to address their patients' identified transportation barriers in a direct way.

The outcomes of the transportation intervention, challenges of the implementation strategies, recommendations, and lessons learned with the aim of continuing to improve future outcomes of the RideCare program have been discussed in-depth in this report. In summary, the RideCare service at CHC addressed transportation barriers for a high number of patients with diverse demographics. However, the popularity of the program led to a capacity constraint on the in-house operated transportation van service and further screening suggests that there is still a significant unmet need. The CHC program was recommended for additional investment towards expansion of the van service. Similarly, the BH program was successful. But it reached a small proportion of patients in need due to the complexities of starting a new program at a large institution, which for example contributed to some delay in the process of identifying patients in need or provision and allocation of necessary IT approvals and other resources for the TS. Although it relied on an externally operated state-run van service, the report includes some suggestions to improve in-house communications and workflow. Being a much larger health facility, BH was recommended to improve the visibility of the TS and ensure a streamlined process to identify, connect and report appointment status for patients with transportation needs.

Regarding next steps, the RideCare-PV project will continue to foster collaboration across multiple sectors in addressing the transportation needs of patients accessing healthcare. Since the conclusion of the program evaluation, BH has made identifying unrealized transportation barriers of patients a hospital requirement. So far, this has not only confirmed the need but even increased the awareness of the need. Consequently, BH plans to continue to support the transportation specialist. CHC has also planned to sustain the transportation specialist's role and hire a second van driver to expand their program. In addition, both programs will continue to liaise with PVTA and others to help patients and the health system in addressing transportation challenges.

Appendixes

Appendix I: Pre-COVID Project Design and Data Collection Plan

The RideCare-PV project was officially launched in October 2019 with the convening of the first in-person steering committee meeting, attended by representatives from PVTA, the BeHealthy ACO, and PHIWM. The initial meetings focused on an extensive discussion of the proposed transportation portal, which would include all public, private, and accessible transportation options in the Pioneer Valley for the transportation specialist to use.

As a first step, we considered in-house development of a transportation portal built out of the BeHealthy ACO OCHIN Epic system, as well as other on-the market solutions such as Kaizen Health, Circulator etc. However, these considerations proved time and/or cost prohibitive after initial market research and conversations with leaders in the field. The team hence decided to go with the minimum viable product: Mass RideMatch - a transportation database developed by Greater Attleboro and Taunton Regional Transit Authority (GATRA) was identified to be used by the Transportation Specialist (TS). Located at healthcare site, the TS was expected to use the RideMatch Database and the Healthcare Scheduling interface to book a patient's appointment given the transportation options available based on the patient's eligibility and the timing of the transportation service. For patient's matched to public transportation/vehicles running on schedule, appointment time and transportation information can be texted/emailed. For on-demand services, it would be a two-step process where transportation specialists would either book the paratransit /PT-1 vans for eligible patients or send the request to the relevant department. Once they receive a response, they would communicate that back with patients/CHW confirming the appointment time.

However, four months into the project the COVID-19 pandemic led to the shutdown of in-person activities, including non-urgent in-person patient appointments at the health centers. At the steering committee meeting held virtually on March 26, 2020, the team agreed to put the project on hold since routine in-person patient appointments were on hold or significantly slowed down and request a no-cost extension of the grant due to the COVID-19 pandemic. Although the project was on hold, the team continued to make progress on administrative components so that we were able to ramp up quickly once the crisis was over. The administrative items worked on during the pandemic included finalizing the job description of the transportation specialist, posting the job description online, seeking necessary approvals for the recruiting and hiring process, finalizing the evaluation plan, and collaborating with the Planning Commission (PVPC) to clean the RideMatch platform that we had identified as the minimum viable product (MVP) for this project.

We included the summary of the original data collection plan as we thought it still might be useful to

present.

Data Collection Plan: Summary

TOOLS	FOCUS
Outreach Debrief & Discussion*	Community groups
Satisfaction with services: Survey	Patients
Satisfaction with services: Follow-up Interview	Patients
Successes and Challenges of implementation: Key Informant interviews	Transportation specialist & member/s of care coordination team

* The Outreach debrief and Discussion is focused on community participation and spreading awareness of the new intervention.

Other:

- Agenda/Notes from Steering Committee meetings
- Job descriptions for hiring of Transportation specialist and documentation of the hiring process (e.g., weeks posted, # candidates interviewed, any perceived barriers by Caring Health or Baystate to efficient hiring process)
- Agenda/Notes from training of Transportation Specialist/s
- Notes/Documentation of the Transportation specialist's process of cleaning and adding new data to the Mass RideMatch tool
- Notes/Documentation of the processes of creating a set of data entry tools (probably using REDCap) and about the number of tests/iterations that took place to ensure the robustness and integrity of the final tools
- Notes/Documentation of the Rapid- Improvement Cycle activities: The Caring Health staff involved in implementation of this effort will follow a Plan-Do-Study-Act (PDSA) procedure periodically using data collected to increase efficiencies and ease of communication among collaborative care staff.
- Notes from Providers' "awareness of intervention" discussion
- Power point presentation and notes from Outreach Debrief, RideMatch demo, and Discussion
- Dataset: The Transportation specialist and other members of the Care Coordination team will enter information into various forms which will populate a set of spreadsheets containing data on; (1) key patient characteristics (e.g., age group, race or ethnicity), (2) transportation access (e.g., # contacts with patient per appointment scheduled), and (3) satisfaction with services information (e.g., the extent to which the patient found the Transportation specialist to be helpful or courteous).
- Financial calculation spreadsheet: This spreadsheet will contain estimations of cost/savings of intervention
- Notes from Caring Health's follow-up interviews with a subset of patients about their satisfaction with transportation services
- Mass RideMatch: Downloaded data from this tool will provide the total "universe" of options available for each patient or patient group (e.g., people > = 65)
- PVTA transportation data such as the average ride time and wait for transport for patients of health centers.

- Impressions of the successes and challenges of the process will be captured with Key Informant interviews.
- Background/Context: Springfield Health Equity Report (PHIWM) & Dr. Dasgupta's prior study of Springfield's transportation barriers

Indicators (from Grant)	Where integrated into plan
1. Reduction in percentage of no-shows at BeHealthy ACO facilities	Q2: ↓ NO SHOW
2. Increase in understanding of transportation options among medical staff	Q1: ↑ AWARENESS
3. Decreased stress and discouragement from trying to navigate the transportation system among patients	Q3: ↑ SATISFACTION
4. Number of patients reached through Transportation Specialist services	Q2: ↓ NO SHOW
5. Percentage of patients from Title VI populations (minority or low-income): TRACKING DEMOGRAPHICS (e.g., age, race& ethnicity) & all ACO& type)	Q2: ↓ NO SHOW
~~6. Percentage of patients who live outside the Springfield UZA (in rural areas);~~	N/A given the geographic location of the study population
7. Number of discussions held to discuss trainings*(what worked, what isn't working etc.)	Q1: ↑ AWARENESS
8. Number of Transportation Software Portal hits** [PVTA can download this information for search for RideMatch in this area: Will give us a rough idea (e.g., from Amherst to Caring Health)]	Q2: ↓ NO SHOW

***** Reconceptualized this indicator to be "Themes of transportation specialist's training"

****** Although some patients may access the app on their own, the sole source on # of portal hits will be data entered by the Transportation specialist.

Each of these indicators is denoted below by a Light blue filled in text box *in the tables below.*

Q 0: **PROCESS: How is the program being implemented?**

What factors influence

#	Indicator	Data source	New or existing data source?	Timeline of data collection	Frequency of reporting on data	Notes
1	Agendas of Steering Committee meeting	Documents/ notes	New	TBD	1 time/2nd quarter	This is to document the types of planning, discussions, and stakeholders involved in implementing this initiative.

#	Indicator	Data source	New or existing data source?	Timeline of data collection	Frequency of reporting on data	Notes
2	Documentation of the hiring process	Documents/ notes	New	TBD (≅ 8/2022)	1 time/2nd quarter	This is to understand what about the hiring process worked well & what could be done better in the future.
3	Themes of transportation specialist's training	Training syllabus	New	TBD (≅ 8/2022)	1 time/Final report	This is to document what was covered as part of the transportation specialist training.
4	Documentation of the Mass RideMatch cleaning and data entry processes	Documents/ notes	New	TBD (≅ 8/2022)	1 time/2nd quarter	This is to document how long the cleaning and data entry processes took and any challenges that needed to be addressed to fully implement this process.
5	Documentation of Rapid-Cycle Improvement (PDSA) plan (MORE FOCUSED ON WORKFLOW)	Documents/ notes	New	TBD (≅ 4-8/2022)	1 time/3rd quarter	This is to explain (in brief) how this process works, approximately how many weeks it was implemented for, and to provide at least 1 example of something that was adjusted as a result.
6	Documentation of creation and testing of data collection tools	Documents/ notes	New	TBD (≅ 3-8/2022)	1 time/2nd quarter	This is to explain (in brief) decision-making around the format, data structure and usability testing of the data collection tools.
7	Identification of implementation successes and challenges (BIG PICTURE OVERVIEW)	Informant interviews (e.g. Transportation Specialists)	New	8/2022	1 time/final report	This component the interview will focus on the early stages of implementation. (HAVE SOME OF THIS INFO FROM MEETING NOTES)
8	Identification of site-specific implementation successes and challenges	Informant Interviews	New	8/2020	1 time/final report	This component of the interview will focus on any unique challenges or successes relative to each site's implementation (e.g., where the Transportation specialist sits relative to members of the rest of the care coordination team).

Q 1: ↑ AWARENESS: To what extent was there an increase in awareness of transportation options among providers and patients?

[From grant] One of the key goals of this project is to optimize how organizations provide non-emergency medical transportation.

#	Indicator	Data source	New or existing data source?	Timeline of data collection	Frequency of reporting on data	Notes
1	Types of info. heard about new intervention	Outreach Debrief, RideMatch demo & Discussion	New	End of February-March	1 time/quarter 2	Dr. Dasgupta (PI) & PVTA leading effort: Scheduling depends on schedule of community groups/organizers. The source of information will be the PowerPoint presentation & notes on the discussion. There also will be a demo of the RideMatch program. Depending on time& funds there may be a 2nd go-around to present findings.
2	# Providers at "awareness of intervention" discussion	Attendance	New	TBD	1 time/quarter 3 or 4	We already know providers are aware of the problem- the discussion will be presenting info. about the new intervention and role of Transportation specialist.

Q2: ↓ NO SHOW: To what extent did the [intervention] decrease the no-show rate at BeHealthy ACO facilities?

[From grant] This service will connect vulnerable patients to the best transportation option available, and thereby reduce waste in the [healthcare] system.

#	Indicator	Data source	New or existing data source?	Timeline of data collection	Frequency of reporting on data	Notes
1	# Of patients reached through Transportation Specialist services*	Database (probably, Redcap)	New	TBD	Quarters 3 & 4	# Of patients reached is defined as the total number of individual patients the transportation specialist contacts
2	# Of Transportation Software Portal hits	Database (probably, Redcap)	New	TBD	Once a quarter	Specialist's first task will be updating the Mass RideMatch app with local information. Although some patients may access the app on their own, the sole source will be data from the Transportation specialist's spreadsheets.
3	# of contacts it takes for transportation to be scheduled*	Database (as long as nts kept for	New	TBD	Quarters 3&4	The idea is to sum (1) contacts with patient (2) contacts with system on behalf of patient (3)

#	Indicator	Data source	New or existing data source?	Timeline of data collection	Frequency of reporting on data	Notes
		every contact made) (probably, Redcap)				contacts with auxiliary personnel (if needed) per case (i.e., defined as a patient's EMR).
4	# of successful matches made*	Database (probably, Redcap)	New	TBD	Quarters 3&4	A successful match is defined as when the transportation specialist's plan matched a patient's identified need so that the patient is able to attend an appointment. Although the specialist will also find a way home, there will not be much data collected on this element of service (only available through Lyft/Uber).
5	Average ride time and wait for transport for patients of health centers	GIS/PVTA data	Existing	TBD	Final report	These data provide context for current experiences of PVTA riders.
6	# & type of transport options available	Mass RideMatch data	Existing	N/A	Final report	These data provide context for what options are available for each patient/patient group.
7	% Decrease in no-show rates (general trend)	Database	Existing	3/2020-9/2020	Once a quarter	Still to be determined: (1) the ease of data extraction & (2) the start date of intervention. (3) the ease of extracting this info. for target populations.
8	% Decrease in no-show rates (specific to target population)	Database	Existing/New	3/2020-9/2020	Once a quarter	
9	% Increase of patients from Title VI populations (minority or low-income);	Database	Existing/New	3/2020-9/2020	Once a quarter	We have the baseline rates of no shows- so although we will look at whether there was a decrease in the rate of no shows- we can't attribute changes directly to the intervention as there are a variety of factors, beyond transportation, that may influence fluctuations in no-show rates.

#	Indicator	Data source	New or existing data source?	Timeline of data collection	Frequency of reporting on data	Notes
10	% Decrease in financial effect of no shows	Database	Existing/New	TBD (as close to the end of project as possible)	1 time/final report	As our baseline "no shows" includes other reasons beyond transportation, this will be an estimation. We will examine (1) the number of no shows over 2 to 3 time periods (e.g., towards beginning, middle, and end) as compared to baseline and each other, (2) # of medications picked up @ Caring Health over 2 to 3 time periods as compared to baseline, (3) back of the envelope estimate of a few CHWs on how much time they estimate saving being able to pass on this task to the transportation specialist.

* If patient characteristics (e.g., age, # of visits to dr. needed per wk, language spoken at home etc.) and eligibility for the service could be linked to the type of transport requested, success rate, or # of contacts made, it would help improve the transportation tool's functionality and utility in the future.

Q3: ↑ SATISFACTION: To what extent did the [intervention] increase satisfaction

with transportation experience among patients *and the community*?

[From grant] [The health benefit of] decreased stress and discouragement from trying to navigate the transportation system.

#	Indicator	Data source	New or existing data source?	Timeline of data collection	Frequency of reporting on data	Notes
1	Stories of extent of satisfaction with services	Follow-up Interview data	New	TBD	1 time/final report	Interviewees will be a random and select sample of participants. Inclusion will not be based on whether a patient came to the scheduled appt. Will ask qs such as to what extent the intervention increased participants' knowledge of transport options & of key interest to the PI: *availability, confidence in access, sense of well-being, and experience with the specialist (when applicable)*
2	% Satisfied with services delivered	Survey	New	TBD	Quarters 3&4	Depending on the tool chosen, this survey will be confidential

#	Indicator	Data source	New or existing data source?	Timeline of data collection	Frequency of reporting on data	Notes
						or anonymous. The Transportation specialist will send out the survey after scheduled appointment (regardless of whether patient came or not). Expected response rate is low.
3	*Stories of success or barriers to access to health care*	*Debrief & Discussion*	*New*	*TBD*	*Final report*	*Depending on time/funds, there may be a 2nd go-around to present findings & hear community experiences of the intervention.*

Q4: ↑ COLLABORATION: To what extent was collaboration among service providers fostered?

[Increased collaboration and coordination among the organizations and institutions involved in this project should lead to better outcomes.]

#	Indicator	Data source	New or existing data source?	Timeline of data collection	Frequency of reporting on data	Notes
1	# Of cross-organization collaborations	Documentation	New	ongoing	Every quarter	This includes major activities that involve more than one organization (e.g., a design team meeting, participation of non-CHWs in a weekly CHW discussion, document collaboration)
2	Identification of implementation successes and challenges	Informant interviews	New	8/2020	1 time/final report	This is to understand what about the intervention went well and what can be improved upon (e.g., portal creation and use, service coordination, relationships etc.)

PREVIOUS DATA COLLECTION:

N/A	*[Pre-intervention]*	*Springfield Health Equity Report (PHIWM)*	*Existing*	*N/A*	*[Context for final report]*	*Useful to explain pre-intervention provider/community awareness of problem*
N/A	*[Pre-intervention]*	*Prior study of Springfield transportation challenges*	*Historical data*	*N/A*	*[Context for final report]*	*Useful to explain pre-intervention patient identification of problem*

		(Dr. Dasgupta)				

Example of what information might eventually be contained in a data spreadsheet:

Type	Data	Notes
Patient Characteristics	Age	If PII concerns, could be grouped (e.g., >= 65)
	# Of visits to Dr. prescribed per month	Defer to what is easiest/available, but it would be helpful to have a proxy for level of care need
	Language spoken in the home	If PII concerns, could be a simple "Y" or "N" for English
	SES	Could be % above/below poverty line (whatever is easiest/already available)
	Diagnosis	Defer to what is easiest/available but could do a set of "Y" or "N" for Asthma, Heart disease etc.
Transportation Access	# Of contacts made	The idea is to sum (1) contacts with patient (2) contacts with system on behalf of patient (3) contacts with auxiliary personnel (if needed) per case (i.e., defined as a patient's EMR).
	Successfully "Arrived"	Whether or not person arrived
	Successfully "Departed"	Probably would not be able to get this information
Patient Satisfaction	Overall Patient Satisfaction	e.g., some sort of "score" on a survey
	Satisfaction with transportation care specialist	e.g., some sort of "score" on those items on the survey

Appendix II: Evaluation question metrics

Evaluation Question #1: How effective has PVTA RideCare-PV been in improving access to health services for vulnerable patients who lack transportation?

Metric	Data source	Notes
# Of appointments successfully completed by patients who are identified as needing transportation	Patient Characteristics and contacts spreadsheet	The contacts spreadsheet contained de-identified information extracted from electronic health record (EHR) database reports, including demographic data, and information on whether the appointment was completed. The BH spreadsheet includes PT-1 approval status and detailed notes from the transportation specialist (TS).
Number of no-show appointments among patients using the transportation services	Patient Characteristics and contacts spreadsheet	The spreadsheet contained attendance data and the BH report contained explanatory notes by TS
Number of transportation service users satisfied with services delivered	Patient Satisfaction Survey & feedback	Via text/email/phone interview (BH) and phone interview (CHC). See each program's report for the method used to analyze this metric.
# Of patients served by Transportation Specialist	Contacts spreadsheet	
% Of Ride Care patients from Title VI populations	Patient Characteristics and Contacts spreadsheet	The spreadsheet included data on language, race, and ethnicity. Primary language is used as a proxy for the national origin category in Title VI.
Other characteristics of populations served	Analyses of patient characteristics from the contacts spreadsheet, additional data collected by CHC and BH, and notes from staff interviews	Other characteristics analyzed included age, sex, severity of health risk (MARA scores for BH patients), and frequency of use of the TS services.
Profile of people reaching out to TS who cannot be helped by the RideCare service.	Patient Characteristics and contacts spreadsheet and monthly staff interviews	Additional information on this indicator was provided in a separate document by CHC

How did the RideCare-PV intervention improve over time and what barriers remained?

Metric	Data source	Notes
Implementation successes and challenges are identified and reported on an ongoing basis.	Monthly staff interview	Indicator of ongoing reflection and learning from experience. Identification of the remaining barriers to patients' use of transportation services for report to PVTA.

Number and list of program improvements implemented in response to analysis of effective processes and challenges.	Monthly staff interview	Measure of extent to which ongoing evaluation translates into program improvements

Appendix III: CHC Transportation Survey

CHC-MA TRANSPORTATION SURVEY

Hello, may I please speak with ***Patient Name - LANG ENG***? Good morning/afternoon/evening, my name is ___ and I am calling on behalf of ***Organization Name*** to follow up with you regarding ride services that you have received from ***Organization Name*** to travel to your appointments. Do you have a few moments to answer some questions about your most recent experiences?

Great, thank you. The reason I am calling is because ***Organization Name*** would like to know more about your van service experiences. Your responses will be used to continue to improve this service. This is a confidential survey so your individual identity will not be shared at any time. This interview should take about five minutes; are you ready to begin?

Q1. In the last three months, about how many times have you *tried* to use the ride service to get to appointments at ***Organization Name***?

- ○ *1*
- ○ 2 - 3
- ○ 4 - 5
- ○ Over 5
- ○ N/A

Q2. In the last three months, about how many times have you *actually* used the ride service to get to appointments at ***Organization Name***?

- ○ *1*
- ○ 2 - 3
- ○ 4 - 5
- ○ Over 5
- ○ N/A

Q3. When you started using the ride service, do you remember talking with ***Transportation Specialist Name*** who was your transportation specialist, and helped you schedule a ride for your appointment?

- ○ Yes
- ○ No
- ○ N/A

Q4. How would you rate the helpfulness of the transportation specialist?

- ○ ***Poor***
- ○ ***Fair***
- ○ **Good**
- ○ **Excellent**
- ○ N/A

Q5. How would you rate the respectfulness of the transportation specialist?

- ○ ***Poor***
- ○ ***Fair***
- ○ **Good**
- ○ **Excellent**
- ○ N/A

For the following questions, please rate your experiences just over the last three months.

Q6. About how many times has your van arrived to pick you up on-time for your appointments?

- ○ *0*
- ○ *1*
- ○ 2 - 3
- ○ N/A
- ○ 4 - 5
- ○ Over 5

Q7. Can you tell me more about the reason or reasons why you have not always been picked up on time?

Add open-ended response here

Q8. When there have been delays, about how much of a delay have you usually experienced in getting to your appointments? Would you say...

- ○ Less Than 15 Minutes
- ○ 15 Minutes To 30 Minutes
- ○ Over 30 Minutes
- ○ N/A

Q9. About how many times have you been able to return home on-time after your appointment?

- ○ *0*
- ○ Over 5
- ○ *1*
- ○ N/A
- ○ 2 - 3
- ○ 4 - 5

Q10. Can you tell me more about the reason or reasons why you have not always returned home on time?

Add open-ended response here

Q11. Have you ever missed a ride for any reason?

- ○ Yes
- ○ No
- ○ N/A

Q12. Can you tell me the reason or reasons why you have missed a ride?

Add open-ended response here

Q13. Over the last three months, how often did you feel welcomed and respected by the van driver?

- ○ **Never**
- ○ N/A
- ○ **Sometimes**
- ○ **Usually**
- ○ **Always**

Q14. Considering your experiences over the last three months, how would you rate your overall satisfaction with the ***Organization Name*** ride service?

- ***Poor***
- ***Fair***
- **Good**
- **Excellent**
- N/A

Q15. Since you started using it, would you say that the service has improved, worsened, or remained more or less the same?

- **Better**
- **About The Same**
- **Worse**
- N/A
- Respondent Disconnected Call

Q16. What do you like the most about the ***Organization Name*** ride service?

Add open-ended response here

Q17. Do you have any comments or suggestions to help improve the ride service in the future?

Add open-ended response here

Q18. How likely are you to use the ***Organization Name*** ride service again in the future?

- **Very Likely**
- ***Somewhat Likely***
- ***Not Likely***
- N/A
- Respondent Disconnected Call

Q19. How likely are you to recommend the ***Organization Name*** ride service to others who may need it in the future?

- **Very Likely**
- ***Somewhat Likely***
- ***Not Likely***
- N/A
- Respondent Disconnected Call

I would like to ask you just two more questions about the impact of this program on you as a patient.

Q20. When deciding whether to make it to a scheduled appointment, would you say that having the ride service is...

- ○ **Very Important**
- ○ **Somewhat Important**
- ○ **Not That Important**
- ○ N/A
- ○ Respondent Disconnected Call

Q21. If this ride service did not exist at ***Organization Name***, do you think that you would schedule fewer appointments than you do now?

- ○ Yes
- ○ No
- ○ N/A
- ○ Respondent Disconnected Call

Thank you for taking a few moments to answer these questions. Your responses will be combined with those of others and used to help improve the program. Have a nice day/evening.

Appendix IV: BH Patient Satisfaction Survey

Patient Study ID*:_____ Date Collected*:_____

Clinic Location*: Baystate Mason Square, Baystate Brightwood, Baystate High Street, Other:_____

Phone format

Hello, may I please speak with <<Patient Name>>?

Good morning/afternoon/evening, my name is ____ and I am calling on behalf of [Baystate Mason Square, Baystate Brightwood, Baystate High Street] Health Center to follow up with you regarding information and help for transportation to your appointments that you have received from [Name of TS], the Baystate Health transportation specialist. She is the person you have talked with on the phone who arranges your rides to appointments. If there are any words or sentences that you do not understand, please ask. Do you have a few moments to answer some questions about your most recent experiences?

[If Yes] Great, thank you. The reason I am calling is because [Baystate Mason Square, Baystate Brightwood, Baystate High Street] Health Center would like to know more about your experiences using the information and assistance provided by [Name of TS]. Your responses will be used to continue to improve this service. This is a confidential survey so your individual identity will not be shared at any time.

This interview should take about five minutes; are you ready to begin?

In the last three months, about how many times have you needed [Name of TS]'s assistance with transportation to get to appointments at [Baystate Mason Square, Baystate Brightwood, Baystate High Street] Health Center?

[1, 2,3, 4, 5, Over 5, Not Sure]

In the last three months, after [Name of TS] helped you, how many times did you get to your appointments at [Baystate Mason Square, Baystate Brightwood, Baystate High Street] Health Center?

[1, 2, 3, 4, 5, Over 5, Not Sure]

How would you rate [Name of TS]'s courtesy? [Poor, Fair, Good, Excellent]

How would you rate [Name of TS]'s helpfulness? [Poor, Fair, Good, Excellent]

- Please explain your response

Have you ever missed a ride (that was arranged by [Name of TS]) to an appointment for any reason?

[Yes, No]

[If Yes] Can you tell me the reason or reasons why you have missed a ride? [Code as Patient-reason; Ride-reason; Patient and Ride Reasons] (Interviewers should record narratives regarding reasons.)

Which of the following transportation options provided by [Name of TS] did you use to get to your appointment:

[Select all that apply: MassHealth PT-1 ride, PVTA Bus, PVTA Van, Taxi, Uber/Lyft, Other]

Rate satisfaction for each ride option selected by patient: How satisfied were you with [insert transportation option]?

- Not satisfied
- Somewhat satisfied
- Satisfied
- Very satisfied

Please comment on the reasons for your answers.

Since you started getting help from [Name of TS], have you been able to schedule rides on your own for appointments? [Yes, No]

[If Yes] Over the last three months, how easy has it been to schedule your own rides? [Very Difficult, Somewhat Difficult, Easy, Very Easy?

[If No] Do you think you will be able to schedule your own rides in the future? [Very Able, Somewhat Able, Somewhat Unable, Unable] (note interviewer be prepared to provide information on how to schedule)

Do you have any comments or suggestions to help improve [Name of TS]'s services in the future?

How likely are you to use the [Name of TS]'s assistance again in the future? [Very Likely, Somewhat Likely, Not Likely]

How likely are you to recommend [Name of TS]'s services to others who may need help getting transport to their appointments? [Very Likely, Somewhat Likely, Not Likely]

Before you started getting help from [Name of TS], did you make it to fewer appointments than you do now? [Yes, No, Not Sure]

Thank you for taking a few moments to answer these questions. Your responses will be combined with those of others and used to help improve the program. Have a nice day/evening

Appendix V: Analysis of Difference Between the BH and CHC Surveys

BAYSTATE HEALTH	CARING HEALTH	METRIC	NOTES
In the last three months, about how many times have you needed [Name of TS]'s assistance with transportation to get to appointments at [Baystate Mason Square, Baystate Brightwood, Baystate High Street] Health Center?	Q1. In the last three months, about how many times have you tried to use the ride service to get to appointments at	1.a.Caring Health: Increase in # and % of patients who are identified as needing transportation who succeed in attending their appointments	
In the last three months, after [Name of TS] helped you, how many times did you get to your appointments at [Baystate Mason Square, Baystate Brightwood, Baystate High Street] Health Center?	Q2. In the last three months, about how many times have you ***actually*** used the ride service to get to appointments at ***Organization Name***?	1.b.Baystate: # of patients who are identified as needing transportation who succeed in attending their appointments	Baystate has no baseline so cannot measure increases but see last question as a retrospective baseline. Possibly community screening and retrospective questions in the survey might enable analysis of increases in ability to attend medical appts.
	Q3. When you started using the ride service, do you remember talking with ***Transportation Specialist Name*** who was your transportation specialist, and helped you schedule a ride for your appointment?	3. % of transportation service users satisfied with services delivered (needs definition and benchmark)	
How would you rate [Name of TS]'s helpfulness? [Poor, Fair, Good, Excellent]	Q4. How would you rate the helpfulness of the transportation specialist?		
How would you rate [Name of TS]'s courtesy? [Poor, Fair, Good, Excellent]	QS. How would you rate the respectfulness of the transportation specialist?		
Punctuality not measured	Q6. About how many times has your van arrived to pick you up on-time for your appointments?	3. % of transportation service users satisfied with services delivered (needs definition and benchmark)	Baystate does not have a van service, but mainly relies on PT-1 or other PVTA services. Some data on punctuality might emerge from patient comments on overall
	Q7. Can you tell me more about the reason or reasons		

BAYSTATE HEALTH	CARING HEALTH	METRIC	NOTES
	why you have not always been picked up on time?		satisfaction or reasons for missing an appointment.
	Q8. When there have been delays, about how much of a delay have you usually experienced in getting to your appointments?		
	Q9. About how many times have you been able to return home on-time after your appointment? Q10. Can you tell me more about the reason or reasons why you have not always returned home on time?		
Have you ever missed a ride (that was arranged by [Name of TS]) to an appointment for any reason?	Q11. Have you ever missed a ride for any reason?	Caring Health: % of no-shows among patients referred for transportation (general and specific to target population Title VI Baystate: % of no-shows among patients referred for transportation as compared with the general population of patients.	The data on missed rides is relevant to the measurement of no-shows, but not possible to be cross-referenced with the data on who showed up. Also not possible to compare the no-show rates before the patients started using the service with their current rates?
[If Yes] Can you tell me the reason or reasons why you have missed a ride? [Code as Patient-reason; Ride-reason; Patient and Ride Reasons] (Interviewers should record narratives regarding reasons.)	Q12. Can you tell me the reason or reasons why you have missed a ride?		
Courtesy is already rated in previous question	Q13. Over the last three months, how often did you feel welcomed and respected by the van driver?	% of transportation service users satisfied with services delivered (needs definition and benchmark)	Caring Health only

BAYSTATE HEALTH	CARING HEALTH	METRIC	NOTES
Which of the following transportation options provided by [Name of TS] did you use to get to your appointment: [Select all that apply: MassHealth PT-1 ride, PVTA Bus, PVTA Van, Taxi, Uber/Lyft, Other] Rate satisfaction for each ride option selected by patient: How satisfied were you with [insert transportation option]? ● Not satisfied ● Somewhat satisfied ● Satisfied ● Very satisfied	Q14. Considering your experiences over the last three months, how would you rate your overall satisfaction with the ***Organization Name*** ride service?	% of transportation service users satisfied with services delivered (needs definition and benchmark)	
Not included	Q15. Since you started using it, would you say that the service has improved, worsened, or remained more or less the same?	3. % of transportation service users satisfied with services delivered	
Not included	Q16. What do you like the most about the ***Organization Name*** ride service?	3. % of transportation service users satisfied with services delivered	
Since you started getting help from [Name of TS], have you been able to schedule rides on your own for appointments? [Yes, No]	Not included	Increased capacity of patients to manage their own transportation options is not in the indicator table, but very relevant to the Baystate model.	Measure of whether [Name of TS]'s assistance improved the patient's capacity to navigate PT-1/MART or PVTA options. More relevant to Baystate model than to a clinic van service.
[If Yes] Over the last three months, how easy has it been to schedule your own rides? [Very Difficult, Somewhat Difficult, Easy, Very Easy? [If No] Do you think you will be able to schedule your own rides in the future? [Very Able, Somewhat Able, Somewhat Unable, Unable]			
Do you have any comments or suggestions to help improve	Q17. Do you have any comments or suggestions to	Implementation successes and challenges	Comments from both Caring health and Baystate surveys

BAYSTATE HEALTH	CARING HEALTH	METRIC	NOTES
[Name of TS]'s services in the future?	help improve the ride service in the future?	are identified and reported on an ongoing basis. Program improvements implemented in response to analysis of effective processes and challenges	provide feedback for implementation. This has already happened for the Caring Health team.
How likely are you to use the [Name of TS]'s assistance again in the future? [Very Likely, Somewhat Likely, Not Likely] How likely are you to recommend [Name of TS]'s services to others who may need help getting transport to their appointments? [Very Likely, Somewhat Likely, Not Likely]	Q18. How likely are you to use the ***Organization Name*** ride service again in the future? Q19. How likely are you to recommend the ***Organization Name*** ride service to others who may need it in the future?	% of transportation service users satisfied with services delivered	
Before you started getting help from [Name of TS], did you make it to fewer appointments than you do now? [Yes, No, Not Sure]	Q20. When deciding whether to make it to a scheduled appointment, would you say that having the ride service is. important, somewhat important, not that important Q21. If this ride service did not exist at ***Organization Name***, do you think that you would schedule fewer appointments than you do now?	1.a. Caring Health: Increase in # and % of patients who are identified as needing transportation who succeed in attending their appointments b. Baystate: # of patients who are identified as needing transportation who succeed in attending their appointments 2.a. Caring Health: % of no-shows among patients referred for transportation (general and specific to target population Title VI) 2.b. Baystate: % of no-shows among patients referred for transportation as compared with the	Baystate question asks for the patient's perception of increased ability to get to appointments. For Caring Health, the increase can possibly be measured using baseline data.

BAYSTATE HEALTH	CARING HEALTH	METRIC	NOTES
		general population of patients.	

Appendix VI: Notes on the Results of the Baystate Patient Satisfaction Survey

The Baystate survey did not include a question on overall satisfaction. The following three questions serve as the best metrics.

Question	# responded (N 55)	Positive Responses	Notes
How courteous/ respectful was the TS?[40]	10	9	Responses of "Excellent" and "Good" were counted as positive.
How likely are you to use the TS assistance again in the future?	10	7	Positive = "very likely"
How likely are you to recommend TS services to others?	10	8	Positive = "very likely"

Analysis of the 45 (out of 55) patients with no response in the 1st wave gives clues on how to improve the methodology in the future. The 38 calls marked "refused" were a mixture of actual refusals, voice mailboxes full, busy signals, wrong numbers, and people who could not use the service or were not interested. Seventeen patients were called twice and were never reached. In the 2nd wave of surveys conducted by a bilingual Medical Assistant, 11 of the 12 additional respondents did not remember a call from the TS. Eleven of 12 said that they did not receive any help with transportation from Baystate but were interested in receiving it.

BH staff suggest reasons for the failure of the survey methodology in the communities served. Most of the transportation specialist's assistance occurred behind the scenes and was not visible to the patients. However, even for patients she serves regularly, the TS recounts that she is just a voice on the phone to many. She often has had to reintroduce herself, because "patients are talking to multiple people [at Baystate]." Second, according to the TS, many in the community are distrustful of strangers calling them on the telephone and will either refuse or not answer the call at all. Finally, the main in-person experience of the users of the RideCare-PV program is with the PT-1 service and the drivers. Most of the comments on their experience or on needs for improvement from the 10 respondents in the 1st wave referred to experiences with PT-1 and not to their interactions with the TS.

[40] Responses to the two questions about courtesy and respect were the same.

Appendix VII: Monthly Team Meeting Interview Protocol

Topics to be systematically analyzed in the evaluation team monthly meetings with RideCare-PV partners:

- Staff perspectives on what is working well and needs for improvement
- Any actions taken to address the challenges or needs for improvement?
- Reasons for documented no-shows (patients scheduled for transportation, or who cannot use transport services for financial or other reasons)
- Discuss no-shows for the rides as well (Caring Health)
- Profile of patients demanding high level of effort for scheduling and learning on how to address these
- Feedback from two rounds of patient surveys to identify what is working well and needs for improvement.
- Data collection issues – EHR reports

Appendix VIII: Additional Data Source: BH's Interview Protocol

Baystate's additional interview protocol with providers of services to certain high frequency visit patients

- How important is it that this patient has transportation for their appointments (to visits with you and for other medical needs)? Why?
- If you saw this patient regularly before April 2022, do you recall if they frequently missed their appointments prior to that? If so, what, if any, were the consequences related to their health? Has their ability to make appointments improved since then?
- What do you believe would happen if this patient did not receive help with their transportation needs, given their current medical condition?

Appendix IX: Responses from Five Providers on the Importance of the RideCare-PV program

From an Email survey of providers by the Chief of General Medicine and Community Health

Survey questions

How important is it that this patient has transportation for their appointments (to visits with you and for other medical needs)? Why?

If you saw this patient regularly before April 2022, do you recall if they frequently missed their appointments prior to that? If so, what, if any, were the consequences related to their health? Has their ability to make appointments improved since then?

What do you believe would happen if this patient did not receive help with their transportation needs, given their current medical condition?

Responses

(Email May 4)

Provider 1, Patient 1

Patient has multiple medical conditions that require frequent monitoring including history of strokes, DVTs on chronic anticoagulation, chronic pain and severe depression. Without the transportation service I don't believe the patient would be able to complete his needs and come to his appointments. His medical conditions require monitoring of medication effectiveness as well as compliance and frequent appointments with good transportation allows me to provide better and more complete care without worrying about if he is going to show up, if he will be late and if he is safe to walk home.

I remember one time family transported him but was late and another time he walked a distance to his appointment, so these visits were unfortunately cut short because I had other patients, so we had to schedule another appointment to address the other concerns. Since having more reliable transportation I know that I can see him regularly and monitor how he is doing.

I worry that without constant monitoring and follow up patient may have another stroke given his history, stop taking his anticoagulation for his clots, or participate in unsafe methods for managing his chronic pain or severe depression.

Provider 2, Patient 2

It is essential that xxx has transportation to her medical appointments. She has a history of Diabetes type II and Hypertension, as well as MDD, PTSD and anxiety. She has poor health literacy and relies on support from a Case manager as well as the CHWs through her insurance to help schedule her appointments and navigate the health system. If she did not have transportation to her appointments, I do not think she would be able to use public transportation to get to the health center, and do not think

she would follow-up as often as she needs to manage her chronic medical conditions. She used to miss appointments intermittently prior to getting the support she now has in place, and her DM has been better controlled in the last year as a result. I think her HTN and DM control would worsen if she lost the transportation services she has in place. She would likely attempt to convert her appointments to Telehealth, but it would not be very effective as she cannot reliably relay information about her glycemic control or blood pressures.

Patient 3

It is also essential that xxx continue to have transportation to her medical appointments. Xxx had poorly controlled DM and uncontrolled HTN when I first met her in 2020. Initially, she did not show up very regularly to her appointments and both of these chronic conditions remained uncontrolled for a long time. In the last year, she has been coming into the clinic more regularly, and has been working closely with our CHWs. In this setting, she has been able to get her blood pressure and hemoglobin A1c to goal (her last A1c was 7.2%, down from 13.9% in 2022!). I think it would be really hard to manage both of these conditions over the phone, and I don't think she would be able to get to the clinic on her own due to a chronic knee injury which limits her mobility. She will benefit greatly from continuing to use transportation services to come to the clinic regularly to manage her chronic medical conditions.

From EMAIL MAY 18

Provider 3, Patient 4

How important is it that this patient has transportation for their appointments (to visits with you and for other medical needs)? Why?

Pt has cognitive impairment, bone fragility and frequent fractures which have led to mobility limitations. She does not drive. Pt is managed by multiple medical specialists and without care coordination services and transportation assistance from ACO team and PT1, pt would not be able to access care at all.

If you saw this patient regularly before April 2022, do you recall if they frequently missed their appointments prior to that? If so, what, if any, were the consequences related to their health? Has their ability to make appointments improved since then?

Yes, before the ACO got involved and pt was active with PT1, pt did not keep appointments and was not able to follow up regularly with her specialists.

What do you believe would happen if this patient did not receive help with their transportation needs, given their current medical condition?

She would not get medical care and her medical condition would deteriorate. She is at risk for worsening kidney damage, bone fractures, calcium deposits in her brain etc. This will lead to declining health, declining functional independence, risk of repeat bone fracture, hospital readmission and possibly if her condition were left untreated death.

Provider 4, Patient 5

He had missed visits/ left the clinic for years and years as I recall… He worked; developed back pain over time: returned to care and got help worth multiple medical issuing incoming hearing loss one side, diabetes (got him on insulin for a while …). That had not been addressed in detail for years .... He has not missed many visits (needed them to get disability and did have many medical conditions) So yeah, uncontrolled diabetes is terrible. Over time - leads to vision, Kidney, neurology/ chronic pain complications. He did need help and I don't know how much transportation helped but certainly could have been a factor.

Appendix X: Processes in Arranging PT-1 Transportation for Patients

The original theory of the BH RideCare-PV program was that the TS would reduce the stress of making an appointment through MART for a PT-1 ride. Mass Health's PT-1 service is designed so that patients can use it on their own either with a phone call to MART or online and in an app. However, in practice many patients need help with coordinating their rides. A new request for approval needs to be made for each ride unless the provider is scheduling a "standing order," which has a very strict definition: several regular appointments to the same clinic address on the same day of the week and the same hour.

Most often, the RideCare-PV process of facilitating the use of PT-1 transportation is the following:

1. The providers' staff fill out the PT-1 request for approval by MassHealth, and receive notice when approval is given. They put the request and then the approval into the patient's chart, which automatically goes into the transportation "pool" that the TS checks daily.
2. The TS calls all patients referred to her to inform them of how the PT-1 service works and to alert them that the approval letter will arrive in the mail. She confirms the scheduling of their appointment(s). She asks if they would like help making the calls to MART – the organization in charge of scheduling and running the PT-1 van service.
3. When patients need TS help for scheduling, the entire process can take up anywhere from one to ten phone calls, with an average of four calls per appointment, and involve calls to provider staff, MART, and the patient. She often makes reminder calls and is called in to help when the original schedules need to be changed or when unforeseen problems arise.
4. To follow up, she often must consult multiple sources to determine whether the patients made it to their appointments, and to trouble-shoot if they did not.