FARE2CARE: A MOBILE SYSTEM OF PRIMARY CARE
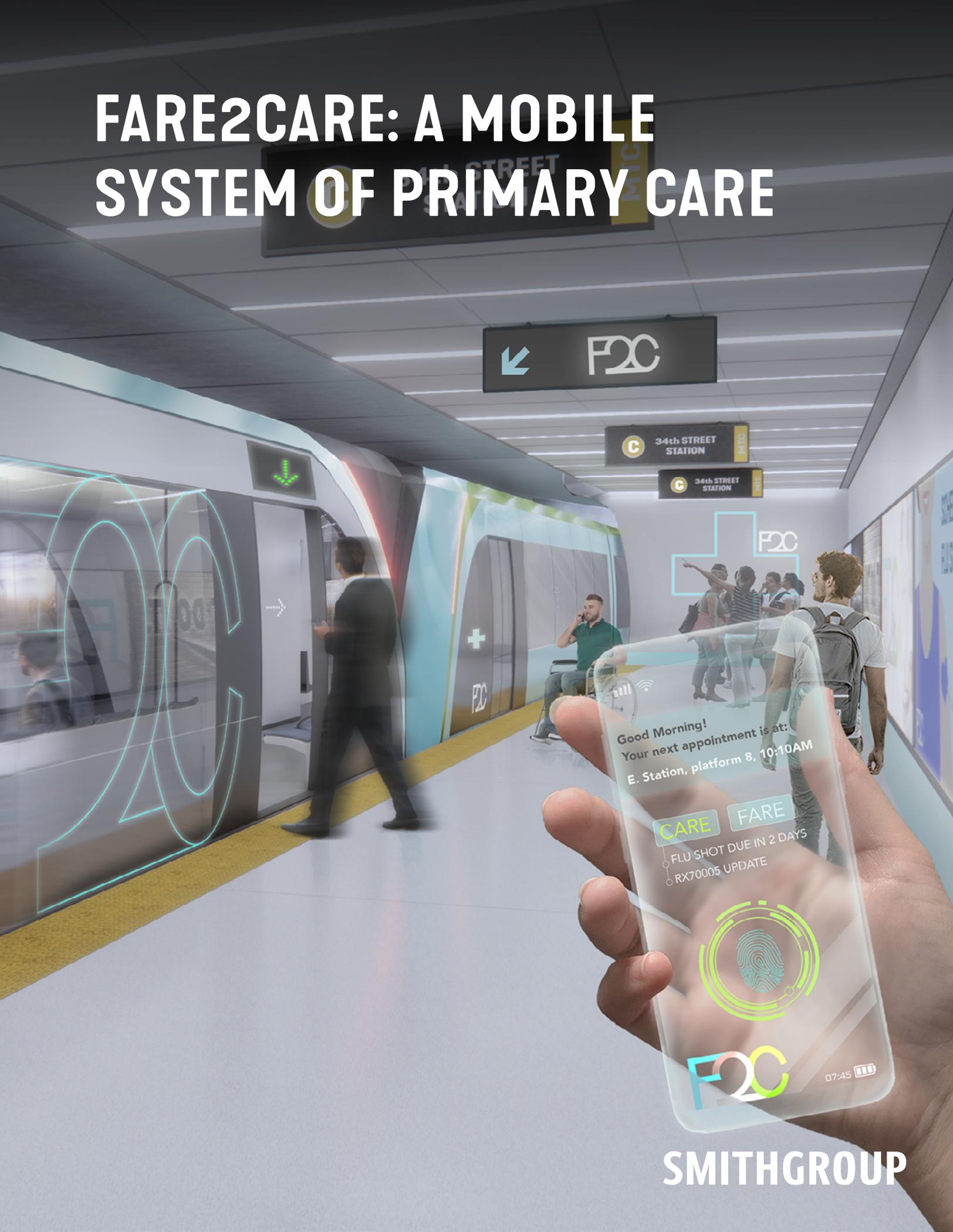
SMITHGROUP

BRINGING HEALTHCARE TO THE PATIENT

Getting good quality healthcare can depend on where you live and how much time you have to attend various medical appointments. Lack of time can be a barrier to accessing a physician not only to treat illnesses, but to prevent an illness or to keep a condition from getting worse.

The United Nations says that primary healthcare can meet 90 percent of a community's health needs—but for this to occur, people need access to that primary healthcare. Between work and family life, it can be hard to find the time not only for a doctor's appointment, but the time it takes to travel to and from the facility, the inevitable waiting time once there and then follow-up visits if needed.

Many underserved communities have added difficulty accessing care. Delayed or deferred preventative and primary care can lead to poorer health and outcomes today—leading to an estimated $67 billion in additional healthcare costs each year in the US.

So, how can a healthcare system bring care to the patients, rather than bring the patients to the care? The answer may be closer than you think. Look at the train tracks that criss-cross major cities and small towns across the country. Now imagine a train with a "medical car" pulling into a nearby station during your commute to or from work, providing you with the medical care you need. This is where Fare2Care (F2C) comes in.

"Primary health care can cover the majority of a person's health needs throughout their life including prevention, treatment, rehabilitation and palliative care."

—United Nations, February 2019

THE CHALLENGE: PROVIDING HEALTHCARE ON THE GO

The physician/patient ratio varies across the country. In the San Francisco Bay Area alone, there are only 64 doctors per 100,000 people. Rural areas have even fewer doctors: 31.8 per 100,000 people. This means doctors have limited time to see their patients and patients may have difficulty booking appointments at times that are the least inconvenient for them.

Fare2Care works with with existing rail systems, including those that reach underserved communities. The F2C cars can also be adapted to different rails systems. When and where needed, the care cars can be converted to road capable dual-mode vehicles (DMV), bringing clinics to remote, "last-mile" service points that lack adequate primary care access.

Distributing Fare2Care in local communities not only helps the patients by cutting down their commute time but also helps medical providers. If primary care physicians know they have access to such a care model, they may be inclined to provide care in the more rural areas.

Care cars can also be brought to underserved communities during off-peak hours, when commuters would be less likely to use them.

> Primary care is more than seeing a doctor when you're not feeling well. Primary care includes administering vaccinations to prevent illness, tests to detect illness, education about a new diagnosis and so much more.

The value of using existing infrastructure is that it already exists in the community. There are 8,000 miles of metro rails in the U.S. Delivering healthcare to the community makes health care more equitable.

TRADITIONAL APPOINTMENT VERSUS FARE2CARE APPOINTMENT

Compare a typical doctor's appointment with a Fare2Care appointment.

DOCTOR'S OFFICE

TRAVEL TIME	CHECK-IN & WAITING	EVALUATION	EXIT PAPERWORK	RETURN TRAVEL
30-45 min	15-20 min	15 min	5-10 min	30-45 min

1 HR 50 MINS

FARE2CARE

	CHECK-IN & WAITING	EVALUATION	EXIT PAPERWORK	
	15-20 min	15 min	5-10 min	

45 MINS
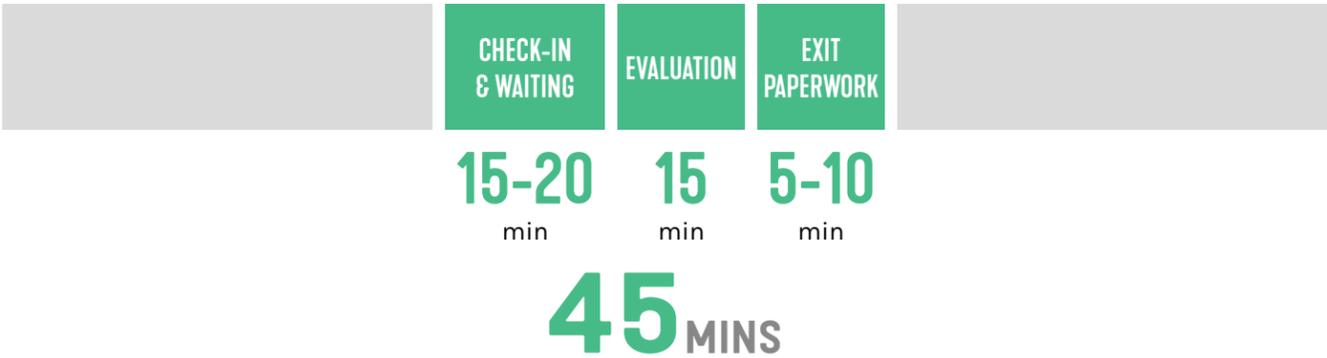
On average, patients spend two hours at a doctor's appointment, but only about 20 minutes of that time is spent with the provider. The remaining time is spent on travel and waiting.

Making healthcare more visible and accessible can help destigmatize Fare2Care riders from obtaining health services, meeting patients halfway without substantially changing their behaviors or lifestyle.

DOCTORS' TIME SPENT IN OFFICE

Now, look at how doctors spend their time.

CONVENTIONAL MODEL			FARE2CARE		
TIME SPENT BY PHYSICIANS of average 51.8 hours			**TIME SPENT BY PHYSICIANS** of average 51.8 hours		
67%	DIRECT PATIENT CARE*	34.7 hours per week	76%	DIRECT PATIENT CARE INCL. TELEMED	39.4 hours per week
3.5%	TELEMED	1.8 hours per week	5%	SELF CARE	2.3 hours per week
15.5%	RESEARCH & LEARNING	8.0 hours per week	12%	RESEARCH & LEARNING	6.2 hours per week
14%	ADMIIN TASKS	7.3 hours per week	7.5%	ADMIIN TASKS	3.9 hours per week

*Includes time spent on EHR, reviewing test results, medication and other orders

By more efficiently scheduling appointments and streamlining the administrative process, providers can be freed up to care for more patients and provide a higher quality of care in the process.

Alerts are personal and private.

EVOLVING TECHNOLOGY

SO HOW IS THE FARE2CARE MODEL POSSIBLE?

F2C has two components.

1. Patients can make appointments to address health issues, either regularly or as needed. Patients can also look up data from previous visits, or see an upcoming care car schedule.

2. The F2C system can detect and notify users who could benefit from a doctor's visit.

When commuters enter a F2C participating station, an early detection system similar to Amazon Go's technology detects elevated body temperatures. If commuters are identified as having a higher than average body temperature, they are directed to a F2C car for tests. If the system suspects an infectious disease, the care car is closed to other users and isolated from the system.

TOUCHLESS TECHNOLOGY REDUCES POSSIBLE SPREAD OF INFECTION

■ The F2C app can be downloaded on smart phones or can be accessed via e-ticket.

■ It's important to note that a smart phone is not required to access the service. Printable smart tickets can also provide access.

PATIENT CONFIDENTIALITY MAINTAINED THROUGHOUT THE PROCESS

■ Patients must have the app, e-ticket or printed smart ticket scanned by a sentry reader in order to enter the care car. Each scan is unique to each user in order to maintain patient privacy and security. No one else can gain access.

THE APP PROVIDES MORE THAN JUST ENTRY AND EXIT FROM THE CARE CAR. FARE2CARE USERS CAN USE THEIR SMART PHONE TO:

■ Keep track of their health records

■ Navigate their personal wellness goals

■ Schedule appointments

■ Refill medications

■ Communicate directly with their care team
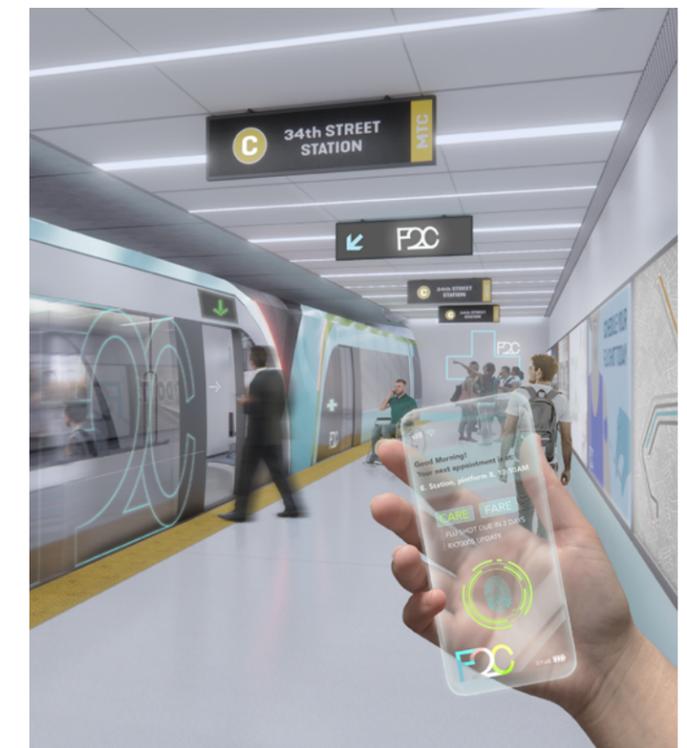
BUT IS FARE2CARE SECURE?

NOTIFICATION

The system does scan commuters for their body temperature, but alerts are personal — no other riders will know that a specific person was flagged by F2C.

There are three layers of security to access a F2C car:

- The dedicated app or printed smart ticket to make appointments and provide information
- Access to the care car is through a dedicated secured-access hallway
- After reaching the assigned care module, admission is only possible if the app or ticket has a valid appointment

CLEANLINESS

F2C cars are designed for optimum cleanliness and air quality without disrupting care.

- Robotic cleaners scrub the cars using UV-C light for disinfecting surfaces and reducing fomite transmission
- In-room far-UV lights in each exam space further limit contamination risk while occupied
- Relative humidity is maintained between 40 percent to 60 percent when car surroundings permit, to reduce infectious aerosol travel, longevity and risk of human contagion
- In-duct UV-C lights will decontaminate recirculated air

In addition, the care cars have a MERV filter rating of 15 or higher. Bipolar Ionization will deactivate viruses in the space, reduce odors and volatile organic compounds (VOCs) and enhance filter capture effectiveness.

What may have seemed like science fiction just a few decades ago is now part of our healthcare system.

HOW ARE THE CARS STAFFED AND OUTFITTED?

Fare2Care does not have doctors or nurses on site. The patients communicate with providers through a telecommunications system.

A typical F2C exam module has a patient chair, integrated peripherals and wearables for vitals, a smart window with privacy mode, and a telecommunications monitor and system. An integrated delivery system allows patients to get many medications on site, or at station-based pharmacies.

The F2C car is more than a moving examination room with extra technology. It is a modular system that allows for adapting the environment from individual specialized examination or treatment rooms to larger areas for several people, such as those attending group therapy.

The modular system can be swapped out to fit other scenarios, such as mass testing, mass vaccinations and even mass casualty events.

A typical appointment lasts 20 to 30 minutes.

CARE CARS ARE ADAPTABLE

MEDICATION ACCESS POINT

INTELLIGENT BODY SCAN

PATIENT SEATING

SMART SCALE
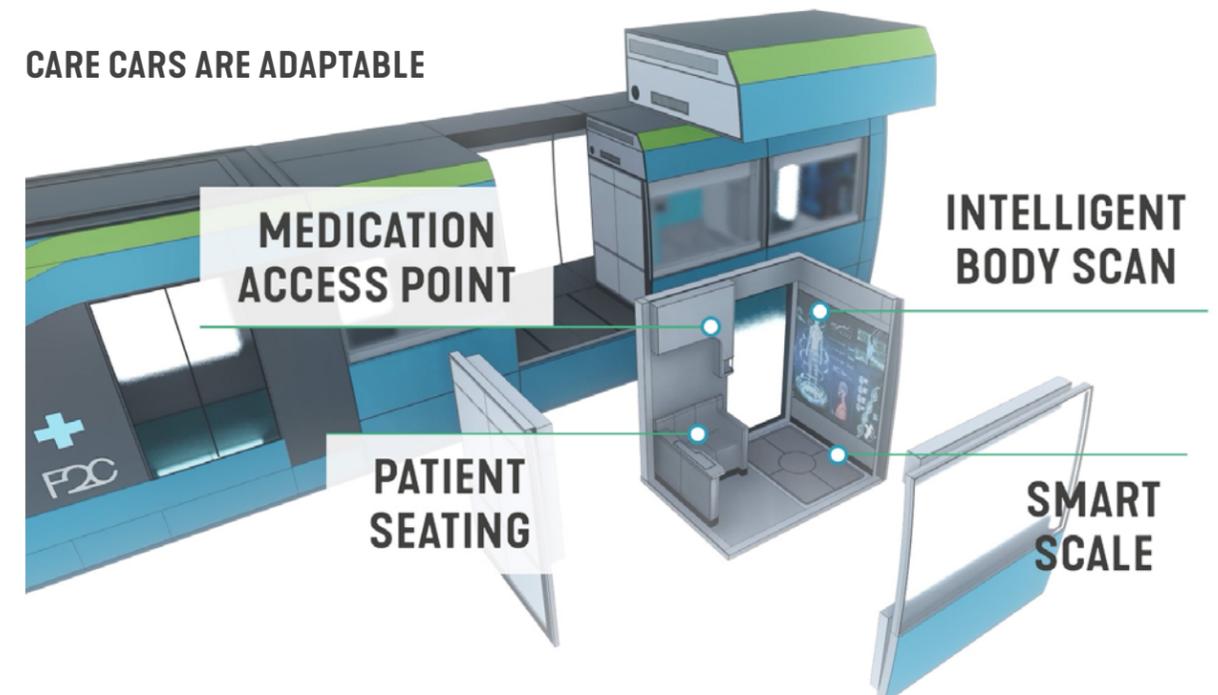
WHO MIGHT BE USERS?

Users of all ages and with a wide variety of needs can access care through F2C. The system is set up to remind users of upcoming appointments and, through smart technology, guide them through the subway or rail system to the pod.

ANNA

Five-year-old Anna is on the autism spectrum and has difficulty taking the train to school because of her anxiety. With the help of Anna's therapist, a care module is set up for her commute, keeping in mind Anna's needs for limited stimulation from lights and sounds. Anna can also connect and talk to her therapist.

Fare2Care works for all ages

FLORES

Flores has type 1 diabetes. The cost of diabetes testing strips, insulin and equipment added up to about $1300 per month. She now uses Fare2Care, where she sees her doctor by telemed, has her blood sugar level monitored, and receives her insulin, which has been stored safely at the right temperature. Since she began using Fare2Care for her twice daily insulin injections, her costs are limited to the F2C subscription and the insulin itself.

Patients can make regular, long-standing appointments for routine care

DEWEY

Dewey uses a wheelchair and needs to regularly monitor his high cholesterol. Fare2Care cars are universally accessible, so Dewey can consult with his doctor and pick up prescriptions without concerns of hitting any barriers.

Fare2Care is accessible, removing barriers to people with mobility issues

KARL

Karl, a frequent traveler, was alerted by the F2C app when the station sensor detected a fever. Karl was directed to a now-isolated care car instead of a commuter car and his fever is confirmed as well as a persistent cough and dehydration. Based on his symptoms, the F2C remote physician advised him to go to the closest partner hospital for further tests. The care car is decoupled from the train and, while Karl is being transported, a robotic intravenous infusion is started. Once Karl disembarks, the care car goes through decontamination protocols before rejoining the regular train route.

775 new BART cars are coming online by 2023. F2C cars could make up 10% of this new fleet (76 pairs)

432,000 trips per weekday in the Bay Area

608 exams are possible at any given time in Fare2Care

112 miles of tracks in the BART system

46 stations that can act as Health Hubs

PARTNERSHIPS

FOR FARE2CARE TO WORK, IT NEEDS PARTNERS

F2C must partner with transportation systems to reach target populations. One example is the San Francisco Bay Area Rapid Transit (BART) system. By partnering with BART, F2C would have access to 112 miles of tracks and 50 stations that could act as new health hubs.

If just two Fare2Care cars were added per 10-12 car train, it would deploy approximately 600 primary care modules through BART's existing mass transit system. That is up to 12,000 appointments available at any given time.

Such relationships can be built in cities and towns across the country.
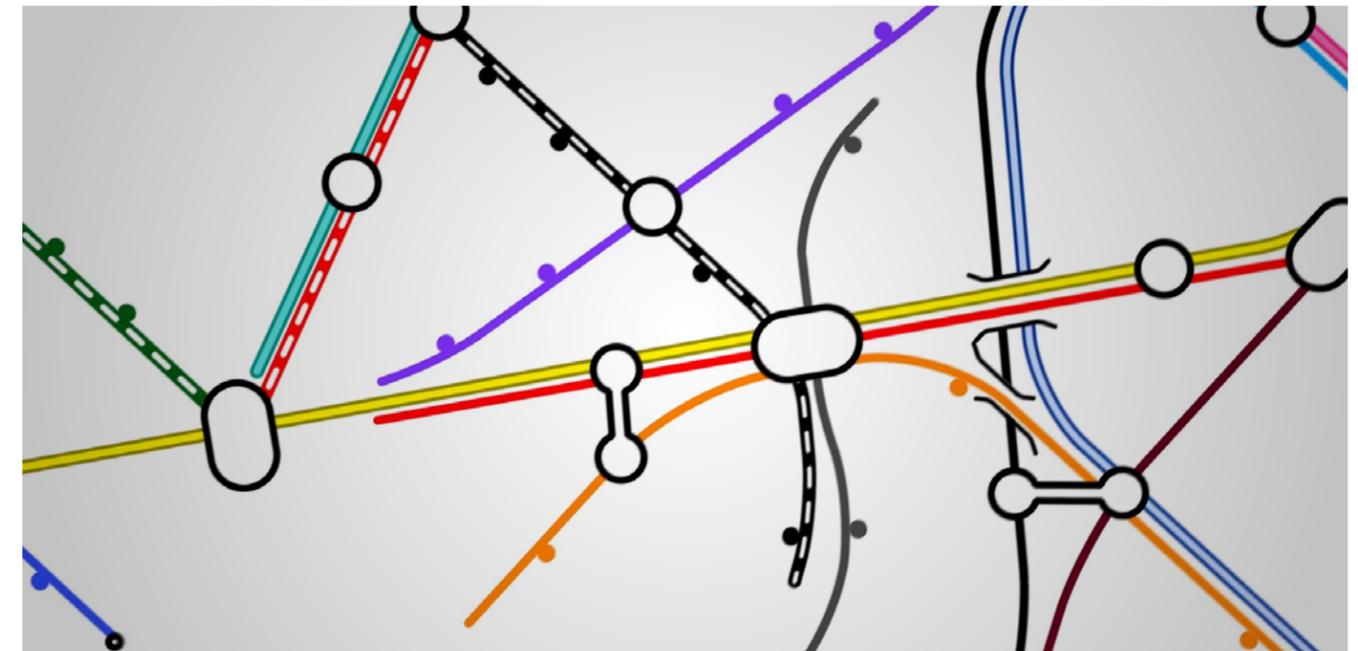
There are nearly 8,000 miles of subway rail across the U.S., and thousands of access points. Fare2Care allows healthcare providers to tap into a vast network, opening up hundreds of locations at once and bring care to their communities when and where they need it.

COMMUTING TIME DOESN'T HAVE TO BE LOST TIME

Fare2Care F2C recognizes lost time as an equitable asset. By adding thousands of new entry points to the healthcare system, commuters can leverage this time and access care when it's convenient—shortening wait times, increasing accessibility and expanding preventative care. This would simultaneously destress the healthcare system, reduce out of control healthcare costs, and improve individual and population health. As a real estate-free solution, Fare2Care addresses equity, access, and convenience all at once, using the transportation infrastructure that exists in most major metropolitan areas. Imagine the impact an immediately mobile, scalable solution like Fare2Care might have on the entire healthcare system, and what it could mean to patients to have easy and accessible preventative care. For patients with chronic conditions such as diabetes or cardiovascular disease, F2C can be a time-saving and cost-effective option to better health maintenance.

The average time an American spends traveling to and from work on public transit varies according to city.

30 min	**45** min	**50** min	**60** min	**90** min
MADISON, WI ATLANTIC CITY, NJ	BOSTON, MA PHILADELPHIA, PA PORTLAND, OR SEATTLE, WA	CHICAGO, IL DENVER, CO MIAMI, FL MINNEAPOLIS-ST. PAUL, MN WASHINGTON, DC	NEW YORK, NY	STROUDSBURG, PA

Commuting times are one-way

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