POLICY BRIEF

OPTION 6: Ridehail equity before, during, and after the pandemic

UP M255

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Executive Summary

As transit ridership fell during the COVID-19 pandemic, many transit agencies reduced their hours and service frequency. Many transit-dependent essential workers were unable to work from home and continued commuting to work despite limited travel options. Referencing sources from before and during the pandemic, we determined advantages, obstacles, trends, and opportunities for ridehail use, especially in regards to mobility-disadvantaged populations.

Ridehail can offer greater convenience, safety, and flexibility compared to other travel options; however, limitations include its higher costs and the need for smartphones and credit cards to request and pay for the service. Before the pandemic, users tended to be younger, higher income, and in urban areas — many of these characteristics were actually associated with decreased ridehail use during the pandemic. During the pandemic, areas with more transit commuters, zero-car households, and lower population density saw the number of trips fall, while areas with a greater proportion of people of color saw disproportionately more ridehail use for essential travel.

In order to make ridehail part of a more equitable transportation system, we can focus on making it a complement to transit, such as through the following:

- Reinstating and encouraging shared ridehail for environmental and economic benefits
- Subsidizing rides, especially to and from transit stops and during off-peak hours
- Encouraging more open data access to understand patterns of ridehail use and identify potential issues such as racial discrimination

1. Introduction

During the COVID-19 pandemic, transit ridership fell significantly. Due to falling demand and the consequent financial losses from reduced ridership, many transit agencies also reduced their hours and service frequency. While some people were able to work remotely or from home during the pandemic, many essential workers — who are already often transit-dependent, and perhaps do not have access to a car — continued commuting to work, experiencing the impacts of reduced transit service. Ridehail services might be able to close that gap by offering access to direct, door-to-door service that can be purchased one at a time — and might be able to play a larger role, post-pandemic, toward a more equitable transportation system.

Ridehailing services such as Uber and Lyft became ubiquitous in the early 2010s. These transportation network companies (TNCs) allowed riders to connect with drivers using a mobile application on their smartphones. These companies offer various service classes, such as individual and pooled rides, in a few vehicle options, leading to different price points for the services. These services have been modified since the start of the pandemic — for instance, standard individual UberX rides, which could have held up to four passengers, are now limited to up to three passengers, as passengers are currently not allowed to sit in the front seat ("What is UberX"). Shared ridehail offerings have also been suspended since last March, and are now being gradually reintroduced in some cities. Additionally, all riders, even if they are vaccinated, must wear a mask or face covering while riding.

2. Ridehail access

On the basis of characteristics such as income, race and ethnicity, gender, and ability, ridehail can offer many advantages that other forms of mobility might not. However, given these same characteristics, there can be numerous obstacles to ridehail access.

Income

The costs of owning and operating a car were estimated to be $9,561 in 2020 (“Average Cost”). This estimate considers gas and maintenance, but costs for parking spaces need to be considered as well. Thus spending money on ridehailing trips, one at a time, might be more affordable for some households compared to buying a car.

However, depending on how frequently, or for what types of trips, ridehailing is used, the costs can still be high — especially when compared to potential options like walking, bicycling, or taking public transit. In fact, depending on these costs, some ridehail users might feel motivated to buy cars. While many of these ridehailing companies offer shared or pooled options that can reduce fares significantly, these services have been suspended since the pandemic, meaning that users can only book individual rides — with higher fares — at this time.

These services are generally offered through applications on smartphones, meaning that simply having access to have a phone might not be sufficient to book a ride — a phone that can access the Internet or has a cellular data plan would be needed, which might not be affordable for all individuals (Shaheen and Cohen). Additionally, the payment component for these services is almost always through the application, and requires these to be through credit or debit cards,

or mobile or Internet banking (Shaheen and Cohen). Some lower-income households might be unbanked, meaning that they do not have a bank account or credit or debit card, and are unable to use such platforms (Shaheen and Cohen). Thus ridehail services might be inaccessible for individuals or households that may not have credit cards or bank accounts for reasons such as insufficient funds or poor credit history (Shaheen and Cohen).

Race and ethnicity

Given the private environment that ridehailing offers, some people may prefer it to other forms of mobility. For instance, people of color often experience greater policing when they travel, resulting in "diminished safety and comfort while walking, biking, driving, or using public transportation as a result of racial discrimination in enforcement" (*Racial Equity Statement*). A private vehicle, as ridehail offers, can reduce some of these opportunities for potential — and often unwarranted — tension and conflict.

Riders using ridehailing services also experience racial discrimation. Generally, drivers tend to discriminate when they become aware of passenger characteristics. In the case of Lyft, a driver might be able to access a rider's name and contact picture for a brief period of time prior to accepting a trip. For all ridehailing services, a driver can also make a decision upon seeing their passenger. Ridehailing does not entirely remove racial discrimination against riders: Black riders experience greater cancellation and wait times compared to riders of other races and ethnicities (Brown). However, ridehail dramatically reduces these outcomes for Black riders compared to taxi services (Brown).

Gender

For female-identifying or non-binary riders in particular, ridehailing can feel much safer than other forms of mobility. This especially applies to travel like walking or riding transit alone, especially at non-peak hours such as late at night. Ridehailing platforms also allow riders to share their trip information, so one's location, trip status, driver's first name, and vehicle information can be viewed by others, which can contribute to feeling safer on the trip. However, safety concerns are not entirely avoided — some people still have uncomfortable or possibly even dangerous ridehailing experiences, given that they might be riding alone with just the driver, and the screening process for ridehail drivers can be less thorough than for other forms of transport.

Ability

Ridehail services can be immensely useful for those who might sometimes have difficulty travelling. For instance, some people have physical limitations that can affect their mobility, such as sensory impairments affecting vision or movement (Taylor). This can prevent them from driving themselves, or choosing forms of active transportation. Some people also have cognitive limitations that might affect their ability to wayfind or handle money (Taylor). Age is also a factor in being able to navigate and make travel decisions alone. Ridehailing is advantageous as it offers door-to-door service, connecting origins and destinations directly. Riders do not need to figure out a first or last mile travel decision, and can mostly avoid having to navigate.

Age and ability can limit a rider's capacity for using and understanding ridehail. For instance, some people may not know how to request a ride or how to set up payment methods, if they are not very comfortable with or do not own technology such as smartphones. An advantage of ridehail, however, is that most platforms allow users to request rides for people other than themselves, which can solve many of these issues. Companies like HopSkipDrive can also make it easier and safer for certain populations — in this case, school-going children — to use ridehail.

The experience of ridehail for those with limited abilities also does depend on the driver. For some riders that might have mobility or cognitive limitations, or for younger or older riders, the locations for drop-off and pick-up can be unideal. They can be difficult to navigate to, unsafe, or not fully ADA accessible. This also applies to the vehicles themselves. Ridehail companies do train their drivers and have certain rules in place — for instance, that drivers cannot refuse service animals — which can avoid some issues. Additionally, the ability to rate and review drivers and rider experience can help ridehail companies determine service quality and act on rider input.

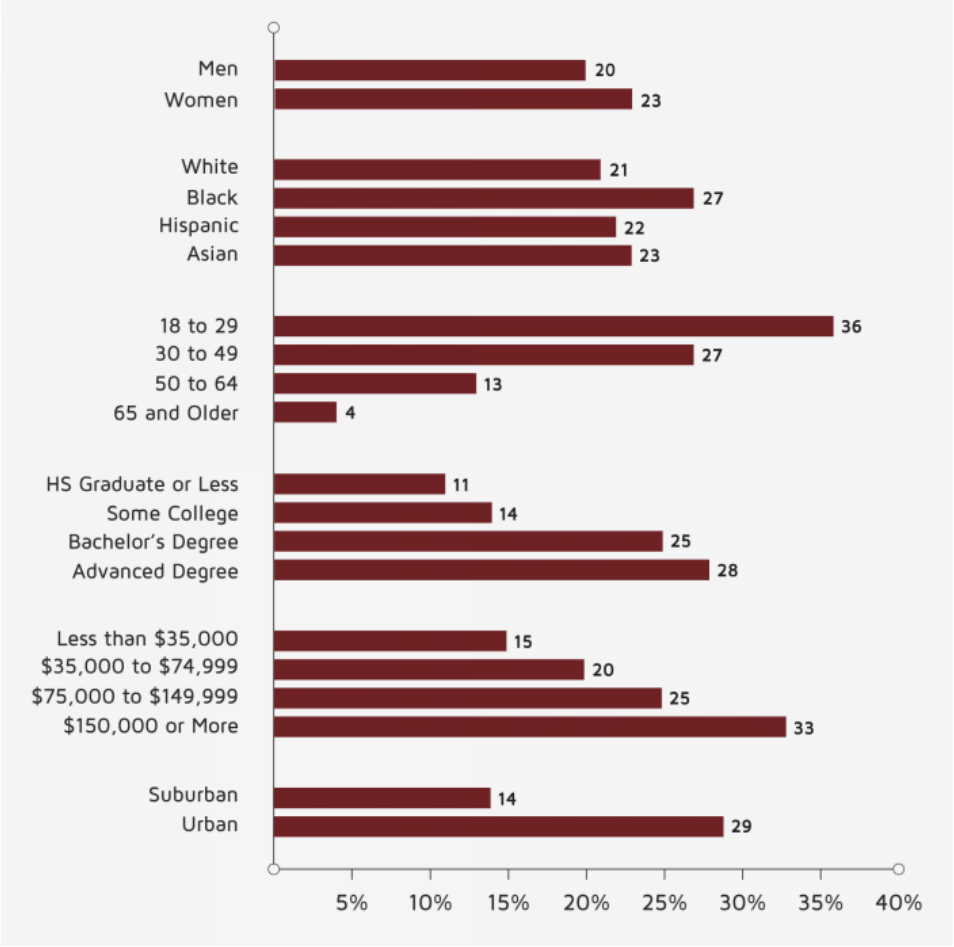
3. Ridehail use before and during the pandemic

Before the pandemic

Ridehail trips are correlated with indicators of advantage, with median household income of a census tract being the strongest predictor for ridehail pick-up and drop-offs (Barajas). In one study, models predicted that if there were more people of color in a neighborhood, there would

be more ridehail usage in neighboring tracts, meaning that ridehail is more likely used in areas with more mixed racial compositions (Barajas). From data collected from fall 2015 to spring 2016 in seven metropolitan areas, the following trends of ridehail use were determined, as seen in Figure 1 (Clewlow). This is a time period when ridehail was becoming very prevalent, so the data is a valid representation of pre-pandemic ridehail use.

Figure 1: Ridehail adoption by demographics and geography



Note: Figure 1 is reprinted from "Disruptive Transportation: The Adoption, Utilization, and Impacts of Ride-Hailing in the United States," by Regina R. Clewlow.

The following are indicators for greater ridehail use among individuals, before the pandemic (Barajas, Clewlow, Young):

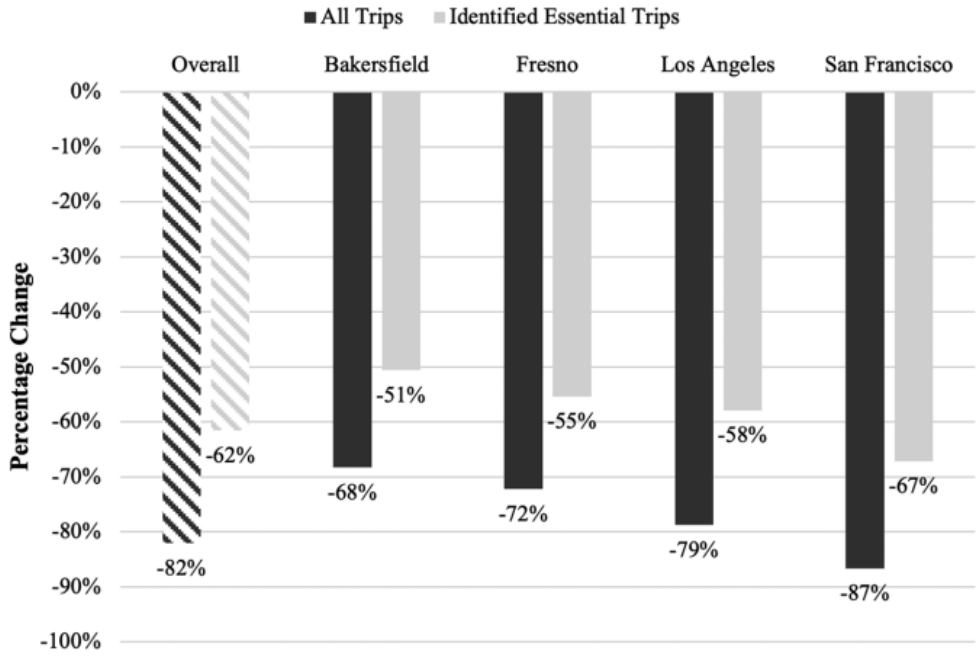
- Younger, especially between 20 and 39 years old
- Living in cities or urban areas
- Living in areas with greater transit service
- Higher levels of education
- Employed full-time
- Higher incomes, e.g. household earning above $125,000
- Female-identifying
- Minorities or people of color
- Owning a monthly transit pass
- Do not have a vehicle in their household

During the pandemic

Ridehail trends have changed since the pandemic, as travel patterns have been significantly affected — some people are able to work from home, and many are avoiding all nonessential travel. In general, among those who tended to use ridehail services, fewer people reported ridehail use in spring 2020 compared to before the pandemic (Matson et al.).

Across four California regions, the number of total trips fell by 82 percent and the number of self-identified essential trips by 62 percent from the start of the pandemic, which can be seen in Figure 2 below.

Figure 2: Percentage change in Uber trips between January/February and April/May 2020, for all trips and those identified as essential, in four California regions



Note: Figure 2 is reprinted from "Equity Implications of Ride-Hail Travel during COVID-19 in California," by Anne Brown and Rik Williams.

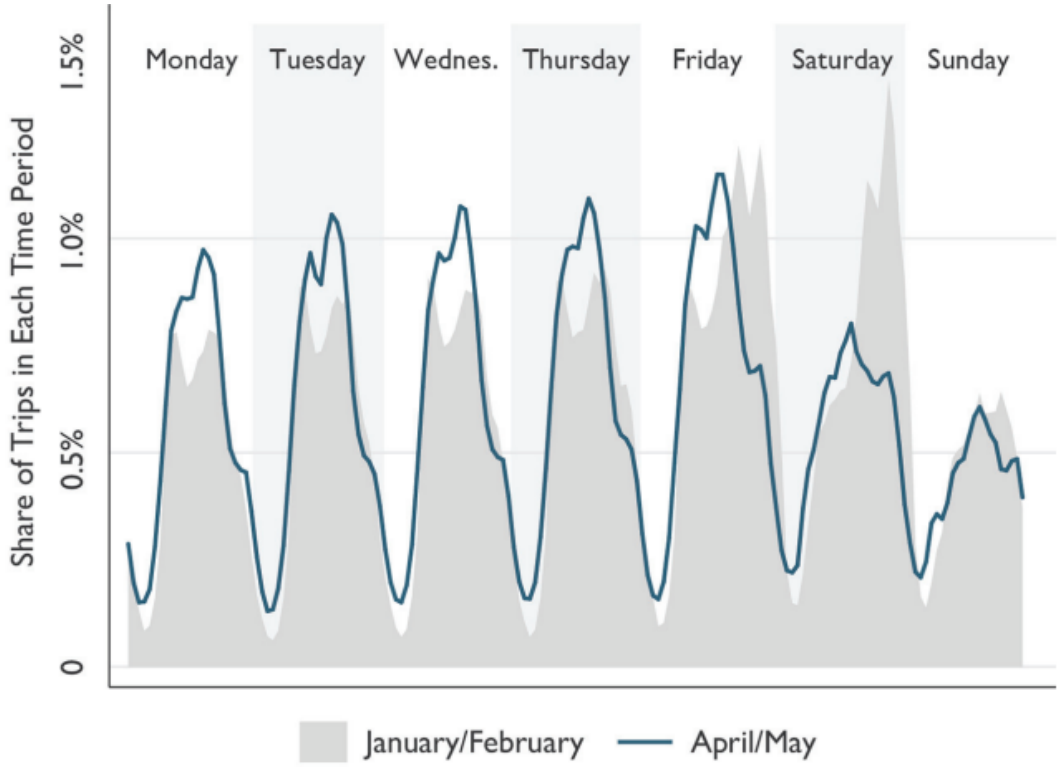
While more trips and trips per capita began in high-income neighborhoods pre-pandemic, this changed during the pandemic: around twice as many ridehail trips per capita were beginning in low-income neighborhoods compared to high-income ones (Brown and Williams). Areas that experienced greater reductions in Uber trips during the pandemic had larger proportions of (Brown and Williams):

- Transit commuters
- Zero-car households
- Younger adults, e.g. between 20 and 44 years old
- Low- and mid-wage job density
- Higher median household incomes

- Lower population density

Another notable finding was that, controlling for variables such as income, neighborhoods with a higher proportion of people of color were associated with more ridehail use for essential trips (Brown and Williams).

Figure 3: Frequency distribution of temporal trip patterns before and during the pandemic



Note: Figure 3 is reprinted from "Equity Implications of Ride-Hail Travel during COVID-19 in California," by Anne Brown and Rik Williams.

Looking at the temporal distribution of trips, as in Figure 3 above, the changed patterns before and during the pandemic might also suggest how trip purposes have changed (Brown and Williams). In January and February, peaking in the early morning and late afternoon aligns with typical commute patterns, with additional peaking Friday and Saturday evenings, suggesting social or recreational trips (Brown and Williams). However, the peaking is not as evident in April

and May, where there are many more trips in early afternoons — this could reflect trips taken when essential businesses are open (Brown and Williams).

4. Shared ridehail during and after the pandemic

Both Uber and Lyft have offered shared ridehail services, UberPool and Lyft Shared, respectively, since 2014 (Shaheen). These services would combine trips of riders who had nearby origins and destinations in a single route, generally with the riders unknown to one another (Shaheen). This is done using an algorithm that optimizes the route along these various points. Due to the delay from using a shared service, riders would usually have a lower fare — by 40 to 50 percent — compared to fares for riding alone (Shaheen).

Due to the COVID-19 pandemic, Uber and Lyft suspended their shared ridehail services in March 2020 (Hawkins). To reduce the spread of the virus, some cities, such as New York, also banned shared trips (Hawkins). As a result, prices for rides went up significantly. For instance, a recent analysis suggests that the price of a ridehail trip in March 2021 was 37 percent higher than in March 2020 (Conger). This price increase was due to a combination of factors, including drivers leaving the platform, for reasons such as fear of getting sick or qualifying for funds through the CARES Act (Conger). This also led to greater wait times for passenger pick ups (Conger). Ultimately, this has affected the way people rely on ridehailing services during the pandemic. One Uber user, for instance, said that it was currently impractical to use ridehailing the way she used to because of the price increase — that instead of an “everyday utility,” ridehail has become a “splurge item” for her (Conger).

Lyft brought back shared rides in July 2021 in Chicago, Denver, and Philadelphia, with restrictions of up to two passengers, all wearing masks (Peters). Similarly, Uber is bringing back shared rides: a pilot, UberX Share, is now available in Miami (Peters). The rules are the same as Lyft's; UberX Share rides will also have a 5 percent discount compared to regular UberX rides, and if a passenger has to share their trip, they will receive Uber Cash (Peters). In addition to passenger subsidies for using these services, pooling could be encouraged through various policies that might give companies tax credits for exceeding passenger occupancy goals or vehicles carrying out pooled rides priority access to curb space (Shaheen). A combination of incentives and reassurance of COVID-19 protocols will hopefully motivate passengers to turn back to pooled services once they become available in their area.

In reality, these shared ridehail services are unpopular with both riders and drivers. Riders balance time and cost savings to determine whether the possibility of being matched with other riders and the consequent uncertainty associated with a shared ride is worth it (Koebler). If passengers are impatient or unfamiliar with the service and have bad experiences, they may also give drivers low ratings, which harms drivers' abilities to be given future rides (Koebler). Additionally, drivers have to manage picking up and dropping separate passengers, for a payment that is usually significantly less than what separate UberX rides would have generated (Koebler). Drivers' dislike, even hatred, for this shared service is very evident on online Uber driver forums (Koebler).

However, suspending these services indefinitely will have a tremendous impact on mobility-disadvantaged riders who might not have many reasonable alternatives. UberPool, for instance, is disproportionately used by riders in low-income or majority non-white neighborhoods (Brown and Williams). Perhaps incentives directly offered to the drivers, such as reducing vehicle registration fees for car owners, will reduce the negative perceptions of shared ridehailing from drivers' perspectives. Of course, passengers who are concerned about COVID-19 or the unpredictability of shared rides can continue to use the non-shared options.

5. Ridehail and transit

Transit service and access is unevenly distributed across space. Decisions such as building commuter-focused transit in low-density, high-income suburbs while overlooking urban cores and lower-income, transit-dependent populations — in order to gain popular support for transit spending — has contributed to this (Barajas). This creates service gaps in places where transit supply is low but transit need is high (Barajas). These "transit deserts" subsequently affect access to opportunities such as jobs or education (Barajas). There is discussion on whether ridehail serves those areas where transit services are sparse, either as a complement or substitute to transit. Identifying these service gaps, however, can be challenging, given that they may differ temporally and contextually.

There are typically two principal markets for transit in the United States: people travelling to places where parking might be difficult or expensive, and people who might have limited car access due to factors such as age, income, or ability (Taylor). As discussed in section 2 above,

ridehail can offer many advantages to both groups of people, in which case it could be a substitute for transit. Its ability to bridge the first and last mile gap problem could make it a complement to transit (Barajas).

Few studies have looked at the relationship between ridehail and transit deserts: one finds less ridehail usage in these areas, which the authors propose might be because of limited ridehail vehicle supply or limited awareness of ridehail options among transit-dependent individuals (Barajas). Another finds that less frequent transit users are more likely than more frequent users to use ridehail as a substitute for transit (Barajas).

A study examining whether ridehail fills transit service gaps in Chicago determined that ridehail is probably not substituting for transit in these areas (Barajas). There is a spatial correlation between low levels of transit service in areas and indicators of socioeconomic disadvantage, such as race and ethnicity, availability of a car, and household income levels — yet, in these areas, there are still pockets of high and low transit availability (Barajas). Additionally, the study suggests that ridehail and transit can be complementary in high-activity neighborhoods, as there are positive relationships between ridehail and rail, and ridehail and overnight transit service, which can indicate first or last mile connections (Barajas). Ridehail trips were not shown to be associated with transit service gaps, but instead with greater transit stop density, overnight service, and median household income — with additional data and analysis needed to understand and explain low levels of ridehail use in certain areas (Barajas).

A study focusing on ridehail's potential for bridging the first and last mile transit gap discusses the Los Angeles Metro pilot program that subsidized ridehailing to and from transit, with the intention of offering services to population groups that might have challenges when using conventional TNCs, perhaps due to factors related to income, technology access, or ability (Brown et al.). However, it is unclear whether all pilot goals were met, as the service was not available in the evenings, which is when individuals might seek substitutes or complements to transit (Brown et al.). Additionally, when a survey was sent out to users at the end of the pilot, the respondents tended to be primarily infrequent users of the service, with higher incomes, technology and vehicle access than the intended target population (Brown et al.). As a result, the effectiveness of the program to increase access as a complement to transit is not fully known, but there is definitely potential for implementing such services to support disadvantaged populations and neighborhoods, to offer greater flexibility for these transit riders (Brown et al., Young).

6. Ridehail and equity recommendations

Contingent on increased authority of Metropolitan Planning Organizations (MPOs) over ridehail regulation in future years, Southern California Association of Government (SCAG) can put into place various policies that could help ridehail become a more meaningful part of an equitable transportation system — that also serves the needs of mobility-disadvantaged travelers.

In order to avoid unconscious stereotyping and the resulting racial discrimination, SCAG could mandate driver training or retraining as part of its operation agreement with these ridehail

companies (Brown). In addition, companies can be asked to reduce what information is available to drivers prior to accepting trips, institute disincentives for cancelling rides, and track discriminatory behavior — and require these companies to publicly publish this information (Brown).

In general, data access could be improved, and SCAG could invest in data collection or sharing efforts. This data should be anonymized to maintain confidentiality (Shaheen). There is undeniably a data gap between private companies and the public entities that make the planning and policy decisions that affect them (Clewlow). With more data, SCAG can better understand the role ridehail can play within the greater transportation system — and what new regulations might be useful to put into place.

SCAG can also encourage pooling by offering incentives, some of which were mentioned in section 4 above. Additionally, pooled vehicles can be given parking and stopping privileges in congested areas or along curbs, or discounts on toll lanes. Riders can be encouraged to take shared rides — or perhaps other modes of shared mobility such as public transit — if SCAG also takes efforts to reduce availability or increase costs of parking, or if they are given incentives through their employers (Shaheen).

For certain populations that might have difficulty using ridehail — such as lower-income or unbanked people, people without smartphones, or people who might have impairments — subsidized ridehail programs, as was tried in Los Angeles, could be promising (Brown et al.). For

people who might not have access to a smartphone, SCAG can also ensure that ridehail services can be accessed through other means, such as a call center or a webpage. These programs could also focus on offering service during times when transit is not generally running as frequently, or only to and from transit stops and stations, so that ridehail can play a more complementary role to transit (Brown et al.). This would help with the first and last mile issues that can be especially difficult for mobility-disadvantaged people. As with any programs that might try to directly help such populations, SCAG should reach out to the wider community to increase awareness for such a program, and identify other barriers to transit service or reasons why people might prefer or avoid ridehail (Brown et al.).

Focusing on increasing ridehail availability for areas and times of day that align with travel patterns for mobility-disadvantaged populations — such as evenings when these individuals might be starting or ending shifts, when other modes of transit might be infrequent, or when active transportation modes feel or are less safe — can make ridehail a more accessible form of transportation (Brown et al.). If carefully implemented, SCAG can also work toward making ridehail a complement to other, perhaps more affordable, forms of mobility such as transit, thus increasing the economic and environmental benefits of using ridehail services.

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