IndyGo Paratransit Operational Analysis Study

Existing Conditions and Industry Comparison - Task 2
Preliminary Considerations and Recommendations - Task 3

October 2019

Final Report

Prepared for IndyGo

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Existing Conditions & Industry Comparison *(Task 2)* and Preliminary Considerations & Recommendations *(Task 3)*

Final Report

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Existing Conditions & Industry Comparison (Task 2) and Preliminary Considerations & Recommendations (Task 3)

Final Report

SUMMARY OF REPORT

This report documents the findings of Tasks 2 and 3 of IndyGo's *Paratransit Operational Analysis*. Study efforts were structured to meet the following objectives and included stakeholder meetings and interviews to understand community and rider experiences and expectations:

- Task 2: To provide a comprehensive assessment of IndyGo's existing paratransit operations and comparisons to industry standards, best and/or emerging practices, and peer agencies. The study analyzed operations for a time period of three-and-one-third years, from January 2016 through April 2019.
- Task 3: To provide a brief overview of preliminary considerations and recommendations based the findings from Task 2.

Organizational Issues: IndyGo's ADA Paratransit Service

IndyGo's commitment to ADA paratransit and specifically the provision of Open Door service throughout Marion County—which is beyond what the ADA requires—was acknowledged by stakeholders as a strength of the transit agency. Stakeholder comments also spoke to IndyGo's willingness to listen to issues and concerns of the disability community and to the agency's dedicated paratransit staff.

The study finds that IndyGo uses a number of good practices with its Open Door contractor, including the provision of vehicles for the contractor's use and contract provisions to address the changing price of fuel. IndyGo also provides the scheduling software for the contractor, another good practice, although it has not provided updated versions of the software since 2012, impacting current operations. IndyGo has discussed plans to provide a dedicated facility for paratransit, another good practice, which would reduce the contractor's fixed costs and, significantly, increase competition for future procurements.

Other findings point to issues with reporting and the role of the Mobility Advisory Committee (MAC), the agency's advisory group for people with disabilities:

- Open Door's performance reports could provide more perspective, explaining that the transit agency accepts an on-time performance (OTP) of 90%, according to IndyGo's performance evaluation framework. While the contract stipulates an OTP standard of 95%, this level has never been attained during the time period analyzed for this study.

- Interviews with IndyGo board members suggested they would prefer more and timelier reports about Open Door performance. The interviews also revealed they lack background information and understanding of certain paratransit issues, which may not be surprising given the complexity of ADA paratransit and evolving regulations.

- Interviews with the MAC suggest that IndyGo does not always notify the committee about the transit agency's plans, in particular plans for fixed route service.

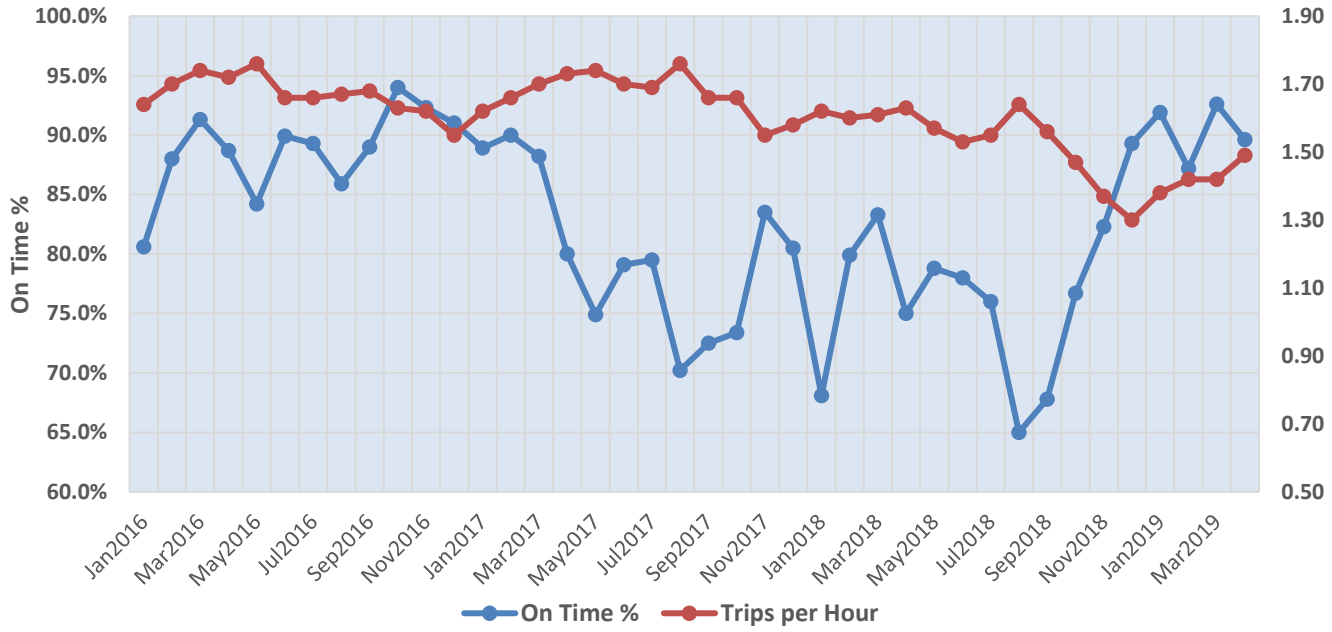
- IndyGo should reconsider its payment process for the contractor's monthly revenue hours. The practice now pays for the same number of hours computed as the twelve-month average of the annual budgeted hours. This does not take into account the fact that months have differing numbers of days and that there is a seasonal pattern to paratransit ridership. Additionally, performance standards and use of incentives and penalties deserve attention. The current structure is overbalanced towards penalties.

Service Performance

From the riders' perspective, the most important measure of performance is whether Open Door is on time (on-time performance or OTP). From a cost perspective, the key measure is productivity (the number of passenger trips carried each revenue hour). Balancing the relationship between the two is a primary objective for a paratransit provider: an emphasis on OTP can impact productivity while an emphasis on productivity can impact OTP.

The figure below shows the relationship between the two measures for Open Door from January 2016 through April 2019. OTP shows improvement by December 2018, yet stakeholders and Open Door riders provided numerous comments about late trips to work

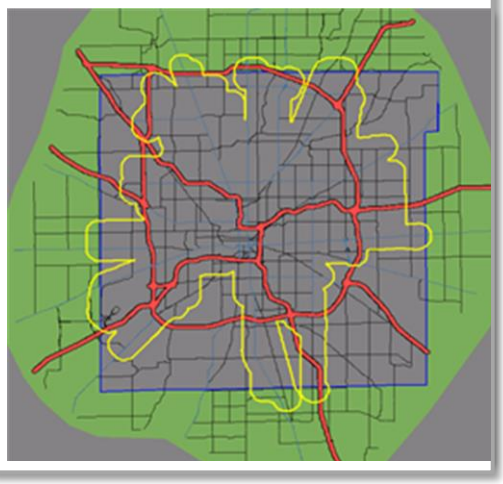
Open Door On-Time Performance vs. Productivity, January 2016-April 2019



and medical appointments, known as time-sensitive trips, as well as long trips, suggesting some performance is below the high levels required by the ADA. The data also suggest that the improving OTP in the first four months of 2019 impacted productivity.

Open Door's ability to reach ADA performance levels is impacted by the countywide service area, which exceeds that required by the ADA by close to 50%. The FTA refers to the practice of providing ADA paratransit beyond ADA requirements as ***premium service*** and recognizes that doing so is a local transit agency decision.

Open Door operates throughout Marion County, exceeding the required ADA area (outlined in yellow) by almost 50%.



Importantly, the FTA cautions that providing *premium service* should not lead to lower service quality for riders using the required ADA paratransit service.

ADA-Required Trips vs. Beyond-the-ADA Trips

To review the impact of Open Door's countywide service area, performance for trips within the ADA required area versus trips that are not required by the ADA—those with one or both ends outside the required area—was assessed for the three months of January through March 2019. This analysis found:

- 17% of total trips during those three months had an origin or destination or both outside the required area.
- 200 of the 1,751 individual riders traveling during the time period had a home/origin address outside the required area.
- Trips within the ADA area are on average more than two miles shorter than those with one end outside and have shorter ride times.
- A higher proportion of 90-minute and longer trips are those with one end outside the ADA area, particularly trips going from inside the service area to outside.

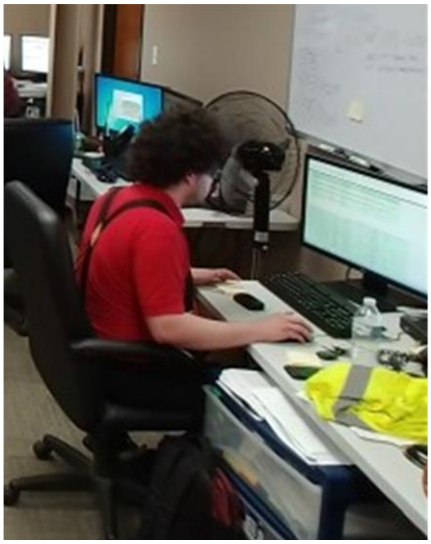
The analysis reviewed timeliness of time-sensitive trips, which are trips booked to arrive by a specific time (e.g., work, medical appointment), and found differences in the trips relative to the ADA service area:

- Trips with an origin outside the ADA area and going to a destination inside had the highest proportion of trips booked to specific appointment times at 23%.
- These same trips— with an origin outside the ADA area going to a destination inside—had the lowest on-time performance at 79%.

Paratransit Technology: Current Tools are Outdated

The most significant challenge for Open Door's contractor and its use of the current technology—the scheduling/dispatch software Trapeze and the TransitMaster ITS system for real-time communications (MDTs)—is the use of older versions. New versions have various functions and features that would improve the performance and use of the technology, but because IndyGo made a decision to continue with existing hardware, operating system, and database management systems, there is no path forward for upgrading. As one example, Trapeze introduced a new feature in 2014—not available for Open Door—that facilitates the ability of a reservation agent to reduce peak period demand.

Contractor's dispatcher using Trapeze Version 2012, software more than six years old.



Stakeholder interviews suggested that new technology features, introduced by transportation network companies (TNCs) such as Uber and Lyft and available through a smartphone, would improve ADA paratransit service. At least one of the paratransit software companies is piloting some of these features for paratransit riders.

Call and Control Center Operations: Trip Reservations and Dispatch

Our review found issues with staff training on the technology, use of standard operating procedures, and effective use of Trapeze, as well as questions about the scheduling parameters that are used with Trapeze. Suggestions are provided to address specific issues.

Effective dispatching is hampered because as many as 20% to 30% of the Open Door vehicles' MDTs are not working on any given day. IndyGo, responsible for MDT maintenance, changed the schedule for maintaining MDTs; the technician now comes during the week instead of on nights and weekends, which means that a significant number of the MDTs are not available during weekday service hours. Paratransit operations are highly dynamic and heavily reliant on the ability to communicate—most effectively with MDTs or similar mobile technology.[1] Without proper communication tools, the dispatch function is comprised, hampering what is perhaps the key function on day-of-service that is able to balance service quality (on-time performance) and productivity.

We also reviewed vehicle pull-out performance and the related measure of timeliness at the first scheduled pickup. Pull-out performance for the past three years was found to be relatively low but consistent, ranging on average from 53% to 60% on time. This metric should be closely monitored because scheduling assumptions for the day depend on vehicles leaving the yard on time. Data for timeliness at first pickup show that, on average, trips were

[1] The contractor reports that IndyGo is now providing more timely MDT maintenance.

late by eleven to fourteen minutes in 2017, about twenty minutes late in 2018, and with improvements in 2019 that came with the contractor's focused attention on improving OTP.

Taxi Vouchers

IndyGo provides three taxi vouchers programs:

- A lottery-based program for a limited number of randomly selected riders that allows for same-day, more spontaneous trips than available with Open Door's advanced, next-day scheduling.
- A program for dialysis patients, with vouchers enabling taxi trips to and from patients' required three-times-per-week treatment.
- Vouchers for subscription trips, providing riders with taxi service to and from the same locations (e.g., home and work; home and human service agency) on regularly recurring days. This program, termed as temporary, was initiated in 2018 to shift some trips from high-demand peak periods to help the contractor improve Open Door's OTP. Growing costs for this voucher program have caused concerns.[2]

The cost per each taxi trip through the voucher programs was set at the same price as Open Door—$3.50. Given that same-day service is considered *premium* by the FTA since it is beyond what the ADA requires, it may be appropriate to charge more than the Open Door fare for the taxi trips. It may also be appropriate to set the cost in relation to the length of the trip and the meter fare. One voucher might be worth $10, $15, or $20. Once the meter fare exceeded the set amount, the rider would pay the excess, giving riders some responsibility for the types of trips they take.

Indianapolis Yellow Cab is the only taxi company of the three used by IndyGo with accessible vehicles able to serve riders who use wheelchairs.

Riders using the voucher programs, particularly for subscription trips and for dialysis trips, view the service very favorably. Administration of the dialysis voucher program is simplified through use of a QR code on riders' ADA ID cards. Only one taxi company currently uses the QR code process. IndyGo plans to introduce the same process to the other taxi companies that participate in the voucher programs by this fall, eliminating time-consuming efforts for administration.

The dialysis voucher program, as currently implemented, does not meet ADA's equivalency requirements since the one taxi company that participates—Triple A—does not have any accessible vehicles; nor does the program meet FTA's drug and alcohol testing requirements. With only one participating taxi company, the FTA considers the company to "stand in the shoes" of the transit agency. Where two or more companies participate in a taxi subsidy

[2] IndyGo is revising the subscription voucher program in the fall of 2019 so that the trips will be shifted back to Open Door.

program so the riders have a choice of companies, the drug and alcohol testing requirements do not apply.

Policies and Procedures

Open Door's performance relative to the ADA's six required service criteria was assessed, with questions raised about adherence to the sixth and most challenging criterion—the prohibition of capacity constraints. This criterion requires, among others, virtually no trip denials and high levels of performance for trip timeliness and for trip length as measured by passengers' ride times.

Measuring trip denials is complicated by the ADA's framework for scheduling, which allows a transit agency to offer trips within one hour before and after the rider's requested time—a time period termed the negotiation window.

Stakeholder and rider input suggest riders are being offered trips outside of the negotiation window. Open Door's monthly reports show virtually no denials; however, our observations of call/control center operations witnessed instances where riders were being offered trips outside of the negotiation window. If accepted, those trips are to be counted at denials.

Trip timeliness at the pick-up end has been at acceptable levels since December 2018 and through April 2019. As discussed earlier, timeliness appears to be an issue for some of Open Door's time-sensitive trips—particularly those that originate outside the service area with a destination inside.

Trip length, measured by ride time, should be comparable to fixed route trips. Comparability, according to the FTA, should be measured on a case by case basis against the same or similar fixed route trip. However, given Open Door's countywide service area, many paratransit trips have no comparable fixed route trip.

ADA's 6 Required Service Criteria:

1. Operate in the same service area as the fixed route system, defined as a 3 /4-mile corridor on either side of bus routes and around rail stations.
2. Have a comparable response time as fixed route, defined as accommodating trip requests for a particular day during normal business hours on the previous day (i.e., next-day service).
3. Have comparable fares to fixed-route, defined as fares that are no more than twice the base, non-discounted adult fare for fixed route service.
4. Meet requests for any trip purpose, that is, there can be no trip purpose restrictions or priorities.
5. Operate during the same days and hours as the fixed route service.
6. Operate without capacity constraints, meaning no waiting lists, trip caps, or patterns and practices of a substantial number of trip denials, untimely pick-ups or excessively long trips.

Our analysis of Open Door trips relative to the ADA service area did find, not surprisingly, that trips with one end outside the ADA service are longer on average by two miles than those with both ends in the service area, a difference affecting ride times. This analysis also finds that the large majority of all Open Door trips have ride times less than 60 minutes; however, some riders are experiencing longer ride times, including trips within the ADA service area, consistent with stakeholder and rider comments about long on-board ride times. From an

ADA regulatory perspective, trips with one or both ends outside the ADA service are considered premium trips by the FTA.

Eligibility Certification

The review found the ADA eligibility certification process for Open Door effective, particularly with the inclusion of an in-person assessment for all applicants.

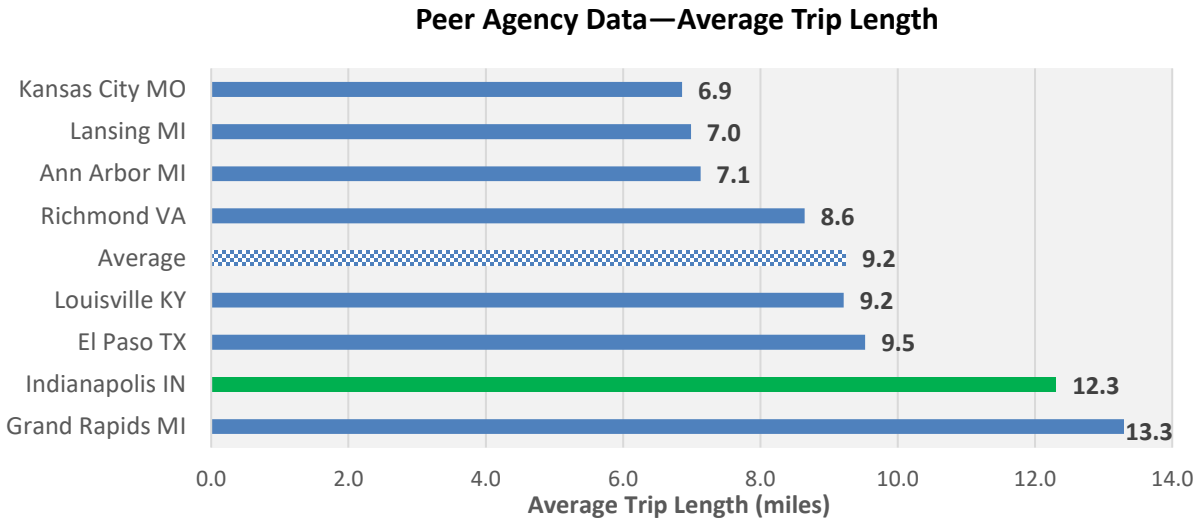
The current contractor is very knowledgeable about ADA requirements for eligibility certification and has attended the well-regarded training session on ADA certification offered by the National Transit Institute. Administration of the process is somewhat disjointed with the contractor's staff in two different locations, requiring the need to move paper files from one office to the other.

The review also finds that IndyGo has no age policy as to when a child can travel alone. Having such a policy for fixed route and ADA paratransit would mean that young children, below the policy-defined age, are evaluated for ADA paratransit along with the adult they travel with. Without such a policy, a child of any age can be certified for ADA paratransit.

Peer Assessment

Open Door's performance was compared to the paratransit service of seven transit agencies using the most recently available national data (FY 2017). Open Door's performance on cost per revenue hour compared favorably with the selected peers. Open Door's productivity—passenger trips per revenue hour—was less than the 2.0 average of the peers, resulting in part from the large service area and average trip length.

IndyGo's average trip length is the second highest of its peer agencies—at more than 12 miles— and more than three miles longer than the average trip length of the agencies, which is 9.2 miles. The long trips impact productivity and also lead to longer travel times for riders.



Trends Affecting Demand and Cost for ADA Paratransit

Trends that affect the demand and cost for ADA paratransit include increasing population growth, particularly of seniors. This age cohort will contribute the most significant potential demand, given the higher incidence of disability among seniors. Demand and cost may also be impacted by human service agencies that shift trips of their clients with disabilities to ADA paratransit. IndyGo has an advantage in addressing this latter trend given its role as the administrator of FTA's Section 5310 program that requires coordination with human service agencies receiving federal funding

Population Data and Projections for Marion County, 2010 – 2040

Year	Population/ Projection	Percent Growth	Population Age 65+	Percent Age 65+
2010	903,393	--	96,102	10.6%
2020	963,732	7%	125,489	13.0%
2030	1,001,231	4%	162,045	16.2%
2040	1,033,719	3%	168,434	16.3%

Source: STATS Indiana: Indiana's Public Data Utility at http://www.stats.indiana.edu

Indiana's private brokers that administer Medicaid non-emergency medical transportation may be contributing to ADA paratransit demand and cost to the extent they shift trips to ADA paratransit, a strategy that benefits the private brokers.

Human service agencies serving clients with developmental disabilities are striving to better integrate their clients into the community, which may affect ADA paratransit demand and cost. As these agencies focus less on transportation for clients to one centralized location for supported work or day programs, but rather to dispersed activities and employment sites, trip patterns will change. There will be fewer group trips and more "few-to-one" and "one-to-one" trips on ADA paratransit, requiring more capacity and cost.

Emerging Practices for ADA Paratransit

Since the 2000s, transit agencies have adopted strategies to address increasing demand and cost for ADA paratransit. While increasing paratransit demand has not been a primary concern for IndyGo, cost is an issue, and there are ongoing concerns about operational performance. To address the issues, some of strategies and emerging practices for ADA paratransit in the industry could be considered by IndyGo.

For example, reducing the service area to the minimum required by the ADA would provide some cost-savings compared to the current countywide service area and would also benefit performance. With trips contained within the ¾-mile corridors of fixed routes, Open Door

would have fewer of the longer trips that often require long travel times for riders. Eliminating such trips would also provide new capacity to improve performance in the required ADA area.

Another strategy is implementation of a same-day taxi program. Such programs must be structured with limits, otherwise the attraction of same-day trips, as opposed to next-day paratransit, creates demand that results in more costs for the taxi trips than is potentially saved by the diversion from ADA trips.

Transit agencies are now piloting same-day programs with transportation network companies (TNCs) such as Uber and Lyft. These programs must be supplemented with a transportation provider with accessible vehicles and a call center and must be able to accept cash in order to meet federal requirements. Research finds that transit agencies that have implemented these pilots find them successful but there is little data to-date that substantiates cost savings.

The study's stakeholder interviews and meetings found considerable support for possible use of TNCs to support ADA paratransit, though some concerns were expressed. The latter included the lack of wheelchair accessible TNC vehicles; the need for riders to have a smartphone (e.g., some people do not have one); the lack of specialized training for transporting people with disabilities; and liability issues.

ORGANIZATIONAL ISSUES

ADA Paratransit, the IndyGo Board, and the Mobility Advisory Committee

ADA Paratransit in the IndyGo Organization

IndyGo's ADA paratransit service is managed by an office titled Flexible and Contracted Services, which is within the Department of Operations with a direct report to the Vice President of Operations/Chief Operating Officer.

The office is organized with a director along with a staff of three who support administration and with three transportation supervisors who monitor on-the-street service. The office is responsible for the day-to-day administration and oversight of IndyGo's contracted ADA paratransit and the supplementary taxi voucher programs for ADA riders. Additional ADA oversight is provided by IndyGo's Director of Compliance and Civil Rights, with a focus more on overarching legal compliance rather than day-to-day paratransit operations.

The IndyGo organization chart includes an additional position for the office that is currently vacant. This position, which is budgeted for next calendar year, will support IndyGo's implementation of conditional eligibility.

The office of Flexible and Contracted Services receives support from several other IndyGo departments and offices. Human Resources personnel conduct audits of the contractor's compliance with the FTA-required drug and alcohol testing for safety sensitive employees. Staff in the Treasury office supports the reconciliation of paper fare media used by paratransit riders. The Maintenance department supports the auditing of the contractor's maintenance practices and reporting, with oversight by the Director of Flexible and Contracted Services to ensure compliance with applicable federal regulations.

Assistance from the other IndyGo departments and offices supports the ability of the office responsible for ADA paratransit to administer and oversee the service. There are periodic activities and analyses that would benefit from additional staff support for the office. These include, for example, analysis of cost savings from use of taxi vouchers and optional methods for providing fuel for the contractor.

Reporting to the Board and Other Stakeholders

As discussed in the Task 1 Report, the performance issues experienced with Open Door in 2017 and 2018 resulted in attention to and scrutiny of the contractor's service and the reports documenting that performance. These reports could provide more perspective on Open Door's performance data, specifically regarding on-time performance (OTP). While the contract specifies an on-time performance standard of 95%, IndyGo accepts a 90% OTP according to the transit agency's performance evaluation framework.

Notably, an on-time performance of 90% is a level accepted in the industry and generally by the FTA (assuming an on-time window of 30 minutes or less). From our outreach discussions, it was clear that stakeholders did not understand the performance evaluation framework. Several stakeholders questioned whether 95% was a realistic goal.

Additional perspective on ADA paratransit's OTP could be provided in comparison with IndyGo's fixed route. (ADA paratransit is intended to be comparable to fixed route, according to the ADA regulations.) If IndyGo reports on-time performance for fixed route, these data could be shared. Our experience indicates that paratransit typically performs better than fixed route on OTP, depending on how fixed route timeliness is measured.

As described in the study's Task 1 Report, input received through stakeholder interviews with IndyGo board members suggested they would prefer more and timelier information and reports about Open Door and its performance. This input from board members also revealed a lack of background information or knowledge about certain paratransit parameters and issues. These included, for example, the reason for developing a dedicated facility for Open Door; the fare policy change that will require ADA riders to pay half-fare on fixed route; and the reason for a 30-minute on-time window for rider pick-ups. This may not be surprising, given the complexity of ADA paratransit, changing trends in the transit industry, and the fact that the regulatory structure for the service has evolved with experience and litigation.

Role of the Mobility Advisory Committee (MAC)

The role of the MAC within the IndyGo structure was an issue raised during study outreach efforts and is relevant for the study.

A review of the MAC structure shows that bylaws formally define the composition of the committee. Formalizing the committee is considered a good practice, helping ensure the committee is structured and membership rotated to bring in new energy and perspectives. The MAC became more active in 2018 and now meets bi-monthly rather than quarterly.

The increase in MAC activity included MAC representation in the evaluation process of two procurements involving ADA paratransit: the first for this paratransit study and the second for a contractor to administer ADA eligibility certification.[3] MAC representation in procurements involving ADA paratransit is a good practice, ensuring the committee has input into IndyGo efforts that directly impact paratransit service. This input ensures consideration of the disability community perspective and that may also help improve IndyGo's services for people with disabilities.

Input from MAC representatives provided through study outreach suggested that IndyGo does not always communicate with the committee in the early phases of plans and services that may affect people with disabilities, for example, plans for fixed route. IndyGo should

[3] According to a MAC Board member, the MAC was not involved in the selection of the current Open Door contractor.

ensure that the MAC is included early in planning discussions for fixed route and fixed route changes. For example, the committee's insights on where to target bus stop and pathway improvements may help improve the accessibility of fixed route service.

The MAC is established to serve in an advisory capacity to IndyGo and its leaders. This role is important and should be encouraged. The inclusion of verbal reports by the MAC Chair at board meetings is a good practice, and the board reports should continue to ensure inclusion of the committee's meeting minutes, helping to substantiate the committee's verbal reports.

Additionally, IndyGo's board members might be encouraged to attend a MAC meeting on a periodic basis to better understand the perspective of riders with disabilities. Input from stakeholders and riders through our study outreach suggested that board members might also be encouraged to take a trip on Open Door to better understand ADA paratransit service.

Organizational Commitment to Accessible Services

IndyGo's commitment to ADA paratransit and specifically the provision of service throughout Marion County, which is beyond ADA requirements, was acknowledged by stakeholders as a strength of the transit agency. Stakeholder input commented that IndyGo is willing to listen to the issues and concerns of the disability community. Stakeholders also noted that IndyGo paratransit staff is dedicated. There were several comments that Open Door service is affordable for the riders.

IndyGo could build on this framework and provide greater organizational commitment to services for people with disabilities by creating an office or management level position that would be responsible for ensuring paratransit and fixed route services are in compliance with ADA regulations. This would involve a hands-on, day-to-day service orientation, with a different focus than the current position of Director of Compliance and Civil Rights. The latter position, held by an attorney, is responsible for ensuring the transit agency's policies, procedures and practices comply with federal laws and programs, including the ADA, the Disadvantaged Business Enterprise (DBE), Equal Employment Opportunity (EEO) and Title VI.

A number of transit agencies have restructured the organization of their services for people with disabilities so that responsibility for systemwide operational accessibility is consolidated within one office or manager. This consolidation directly links accessible fixed route and ADA paratransit and gives more visibility and prominence to the agency's overall accessible service for people with disabilities.

Such a restructuring is more than rearranging the agency's organization chart: it's a more holistic approach to serving riders with disabilities than placing ADA paratransit in an office by itself. A restructuring may facilitate additional agency resources on improving fixed route accessibility. And, significantly, a consolidated approach to providing transit service for people with disabilities better aligns the transit agency to the goals of the ADA.

This new office or position might also provide mobility management, as discussed in the Task 1 Report. Assistance with the range of transportation services for people with disabilities fits within an accessibility office or manager of accessible services and expands the support that can be provided to people with disabilities. Providing mobility management specifically recognizes that IndyGo is not the only provider of specialized transportation: there are other organizations in the community that provide or support transportation and they share in that responsibility.

It is important to recognize that IndyGo's implementation of new and expanded fixed route service starting in the fall of 2019 does include plans to improve accessibility. This involves a plan to upgrade almost 200 bus stops in the next year, which will include ADA accessibility improvements and, in some cases, may include the provision of connecting sidewalks as well.

Additionally, the City of Indianapolis and Marion County have plans to improve the pedestrian infrastructure to benefit access to transit through several initiatives: a program in the city's Department of Public Works titled *Safe Routes to Transit;* Walkways, the Indianapolis Pedestrian Plan; and Indy Moves, Indianapolis's Transportation Integration Plan.

Other efforts to better link ADA paratransit and accessible fixed route include:

- Re-brand the ADA paratransit eligibility certification process as a transportation assessment rather than a determination of eligibility for ADA paratransit.

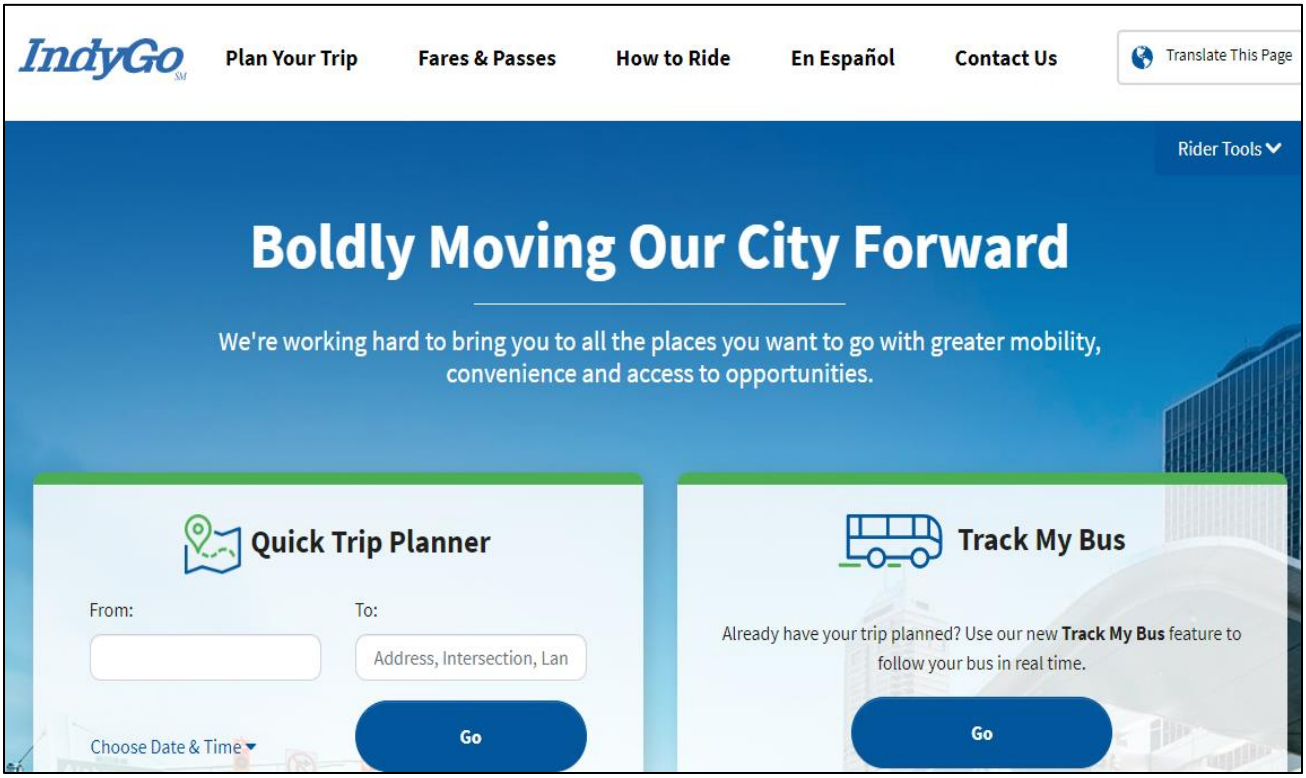
- Ensure the MAC is included early in all planning efforts regarding fixed route with the opportunity to provide input and feedback on studies and projects that feature fixed route, as mentioned above.

- Coordinate with the City of Indianapolis and Marion County as their plans to improve the pedestrian infrastructure move towards implementation.

- Elevate information about accessibility on IndyGo's website. The website header features a number of main menu items—*Plan Your Trip, Fares & Passes, How to Ride, En Espanol, Contact Us*—but accessible service is not one of the main items; see Exhibit 1 on the following page. To emphasize services for people with disabilities, the website header might add a menu selection for *Accessible Services*, which would include links to information on accessible fixed route, ADA paratransit (Open Door), the taxi vouchers, etc.

An additional consideration, which was provided through input we received through stakeholder interviews, would involve including a member with a disability on the IndyGo board.

Exhibit 1: IndyGo's Main Webpage (top portion)



Relationship with the Contractor

Contractor's Responsibilities

The paratransit contractor's primary responsibilities include:

- Arranging trips for eligible riders, which includes call-taking, scheduling, and dispatching the trips using the computerized scheduling/dispatch software provided by IndyGo.
- Hiring and training of all operating staff.
- Collecting and reconciling fares.
- Managing the subcontractor—MyCity – which provides approximately 20-30% of the driver workforce. Use of this subcontractor supports Transdev's efforts to meet IndyGo's Disadvantaged Business Enterprise (DBE) participation.

- Managing the fleet and vehicle maintenance for the revenue vehicles provided by IndyGo, including hiring and training maintenance staff.

- Providing required reports and data.

We note that the contract includes language that implies that complaints from riders are taken by the contractor and then transmitted to IndyGo. However, staff reports that complaints (and other rider comments) are provided through IndyGo's comment process that is used for all IndyGo services. The paratransit contactor is involved as needed for the resolution of complaints.

The roles and responsibilities for certain aspects of the paratransit service need attention, as described below:

Road Supervision

IndyGo provides road supervision for the contractor's service. This is unusual and not a common practice for contracted paratransit services. We were told that at least one IndyGo road supervisor has access to the Trapeze software and uses that access to reschedule and dispatch Open Door trips, sometimes without consultation with the contractor's control center staff. Apart from the potential disruption to the operation, the contractor is then held responsible for those trips.

While IndyGo may want its own employees to provide monitoring of the contractor with direct observations on the street, the contractor should have its own road supervisors providing observations and support.

Maintenance of the Vehicles' Communication Equipment

IndyGo provides radio communication equipment for the paratransit vehicles as well as maintenance of the communications system. However, the consultants learned that an important feature of the ITS (Intelligent Transportation Systems) maintenance infrastructure is missing at the contractor's garage facility. It was noted that the previous contractor's garage facility was furnished with wireless LAN (local area network) which allowed for the vehicles equipped with MDTs (mobile data terminals) to automatically receive software updates and bug fixes when they entered the lot. Without this capability at the current garage, vehicle MDTs have to be individually updated manually with these important updates. The time-consuming and labor-intensive process of going to each vehicle may leave some vehicles without updates, which in turn can cause communications issues and MDT failures.

As discussed later in this report under the topic of Technology, the services of an IndyGo technician who provided maintenance for the paratransit communication equipment after-hours has not been available since December 2018. Maintenance is now done during regular business hours, conflicting with paratransit service hours. At the time of our on-site work in

June 2019, more than 20 paratransit vehicles were without working MDTs, significantly hampering effective communications between the drivers and dispatch.

Financial Structure

Several components of the financial structure of the contract are discussed below.

Fuel

Fuel can be a costly contract element. Since the cost for fuel fluctuates with market forces, it is difficult for a contractor to predict fuel cost into future contract years when budgeting a new project. IndyGo provides for fuel at a rate of $2.00 per gallon; if the cost exceeds that rate, IndyGo makes up the difference and if below the rate, the contractor rebates the difference back to IndyGo. This practice saves the contractor from having to predict fuel prices over a multi-year contract period.

Other options for fuel include:

- Provide fuel as a pass-through, which can be an option preferred for providers operating dedicated service as is the case for IndyGo.
- Allow the contractor to purchase fuel directly from the transit agency.
- Provide fuel to the contractor's site into tanks at the site. Note that if the contractor does not own the site, there could be some liability issues with having fuel tanks on leased property.

For the latter two options, transit agencies typically save money as they are exempt from federal and sometimes state fuel taxes, while private contractors are not.

Facility

IndyGo has discussed plans to provide a dedicated facility for the paratransit contractor. This would provide cost saving in the long run, as it decreases the fixed costs for the contractor and increases competition for the contract. For private contractors interested in bidding on transit projects in urban areas, securement of a suitable facility can be difficult. A transit agency that can provide a facility for its contractor's use will avoid this issue and increase competition. Where the contractor must provide its own facility, the incumbent contractor will have an advantage over other transportation companies interested in bidding. The provision of a facility for the contractor use can be particularly helpful for smaller, non-local companies, as they have more limited resources for searching for a suitable location and planning and funding site improvements.

Vehicles

IndyGo's provision of the revenue vehicles to the contractor is considered a good practice. When a contractor must provide the major capital items for a paratransit contract, such as the revenue vehicles, the transit agency will pay not only for the actual cost for those capital items but also a mark-up by the contractor that accounts for the use of the contractor's funds. Private companies look at their return on investment (ROI), and if they are investing their funds to purchase vehicles or scheduling software or some large cost item that must be purchased for the contract, they will evaluate the return their money could get elsewhere. The contractor's mark-up accounts for this valuation. When transit agencies have capital grant funds, it is more cost-effective to use those funds to acquire needed capital equipment. Then it becomes important for the transit agency to monitor the contractor's use of the equipment, particularly revenue vehicles.

Contractor's Monthly Payment

Use of a fixed and variable cost structure for the current contract is a good practice, and one that is increasingly used in the transit industry. Fixed costs cover such things as facility rent and management, and administrative and call/control room staff salaries and benefits. Variable costs include driver wages and benefits, and maintenance costs including maintenance labor.

In the statement of work for the paratransit service, IndyGo specified that it "will contract for a total of approximately 16,500 total revenue hours per month for the Open Door service with the option to add revenue vehicles and revenue hours as budgeted during the course of the contract." The Bid Offer Cost Form for the RFP further specified an annual total of 198,000 "Estimated Hours" for Year 1 (and Years 2 and 3).

Starting in March of this year (2019), IndyGo began paying the contractor no more than 16,500 revenue hours per month (the average of 198,000 hours based on 12 months). Previously, the contractor was paid for the reported number of revenue hours operated, minus any adjustment required after IndyGo's review. Over the first year of the contract, the number of revenue hours as documented on the invoices fluctuated over the months between 15,334 (July 2018) and 17,448 (October 2018).

Setting a ceiling on the number of hours per month that the contractor can invoice may be seen as a method to try to force higher productivity, but there are issues with this approach. The months of the year have a differing number of weekdays and weekend days and paratransit ridership has a seasonal pattern, which impacts monthly ridership. The months of October, April and May tend to be higher ridership months compared to winter months in cold climates and to summer months, typically July and August. This means that the number of revenue hours needed each month will vary somewhat.

Typically, when a contractor has bid on an annual number of revenue hours, the contractor tries to stay reasonably close to the monthly average of the annual total, knowing that there

will be some monthly variation. But at the end of the year, the contractor strives to not exceed the annual total for the year.

We note that the total annual revenue hours provided by the contractor over the first contract year (April 2018 - March 2019) totals 196,698, less than the annual total of 198,000. IndyGo should reconsider its payment structure, so that it recognizes differing ridership patterns by month and season, while staying within its annual budget.

Another consideration in the future for the contract payment structure is to include a trigger clause to allow a renegotiation of the fixed and variable costs with a specified change to the transit agency's requirements for the service. If, for example, the transit agency decided to scale back the contractor's service, fewer revenue hours would be needed and this could impact costs. With significantly fewer revenue hours, for example, fewer scheduling/dispatch staff would be needed and this could decrease fixed costs. Conversely, if the contractor is asked for significantly more service, this would require an increase in scheduling/dispatch staff and therefore increase fixed costs. Such a trigger clause would allow for a change to the fixed or variable cost with more than a 10% or 15% change—up or down—in revenue hours.

Performance Measurement

The current framework for performance measurement of the contracted service deserves attention, including standards and use of incentives and liquidated damages (penalties). An incentive is intended to award service that meets or exceeds a defined level of performance, which should be a level that is potentially attainable. A liquidated damage is intended to be compensation paid to the "injured party" (i.e., the transit agency) for the contractor's failure to meet specified performance. The amount of compensation should be directly related to the actual harm that is caused.

The 95% standard for Open Door's on-time performance appears too high: the service has not reached that level in the time period assessed for the study—January 2016 through April 2019. A reasonable standard should be a level that is achievable. What is more important than whether a contractor achieves an OTP of 90%, 93%, or 96% is the *lateness* of trips below the standard: 3-4% that are within 5- 15 minutes of the on-time window are generally not unacceptable in the industry but 2-3% of trips that are 60 minutes or more past the window is not acceptable.

The standard for productivity is listed in two places in the contract: the first citation states that the standard is 2.0 passenger trips per hour and the second cites 1.7, which is part of a list of performance measures titled Contractor Performance Evaluation. This list states that the contractor is assessed a penalty of $500 for each 0.1 passengers per revenue hour below the goal of 1.7 and a $500 incentive for each 0.1 passengers per revenue hour above 1.8. The contract also specifies that the calculation of productivity is to exclude personal care attendants (PCAs). The FTA's National Transit Database instructs transit agencies to include PCAs in the count of passengers for demand response/ADA paratransit services. IndyGo

reports that current data collection and reporting does include PCAs within the ridership counts.

The standard of 1.7 has been reached during the time period assessed for this study but not since Augusts 2017. The 2.0 level has never been reached during the time period reviewed for the study. It is noted that the shifting of some of the ADA trips to taxis during the performance issues experienced after the contractor transition may have affected the contractor's ability to reach the productivity standard: some of the ambulatory subscription trips, which help contribute to productivity gains, were shifted to taxis.

IndyGo's current approach for incentives and penalties for performance is over-balanced towards penalties, as discussed in the Task 1 Report. The contract includes four performance standards, which are included in a longer list of 50 performance measures. Twenty-five of the measures are associated with financial consequences: six of the 25 have a financial incentive, and 24 have a financial penalty (liquidated damages). For example, every missed trip has a penalty of $50. It is more common to allow a small percentage of missed trips (e.g., 0.5%-0.75%) before a penalty is applied.

Given that the contractor implicitly accepted the performance standards and evaluation framework when signing the contract to provide Open Door service, IndyGo is not likely to revise the standards. However, two suggestions are offered. The first is to clarify the performance reports regarding OTP so it is clear that the performance framework accepts OTP at 90%. The second, which attempts to address the over-balance towards penalties, is to consider moderating the amounts assessed for some of the penalties. Currently, for example, missing the productivity standard is a penalty of $500 for every 0.1 passenger/revenue hour below the goal. Productivity is important but a focus on productivity can impact OTP. Notably, productivity is not an ADA requirement while OTP is.

IndyGo reports that it negotiates all penalties with the contractor, with the opportunity for forgiveness if the reason for missing the performance target is legitimate (e.g., a lengthy trip with five riders will likely mean the first rider boarding has a long ride time). Such negotiation is reasonable; it should also allow for the waiving of penalties when circumstances beyond the control of the contractor impact performance. This could include, for example, a street festival that closes downtown streets, an unusually heavy snowfall, or some other uncommon event that severely impacts traffic. When such occurrences happen, OTP will suffer and ride times will likely increase.

Contractors expect a reasonable number of penalties/liquated damages, coupled with realistic performance standards; however, this should be balanced with incentives. When a private provider bids on a paratransit contract and finds that the transit agency has applied various penalties to the incumbent for failing to reach standards that may seem unrealistic, they assume they too will be penalized and budget accordingly, adding costs to their budget to account for expected financial penalties. The result is higher costs for the transit agency. This is something that IndyGo should consider in its next procurement cycle for paratransit.

Some paratransit contracts, at least in California, no longer include incentives and penalties. The thinking behind this is that it saves efforts for both the transit agency and the contractor to calculate and then negotiate financial consequences. It is the overall performance of the contractor that is most important—for retaining business and for maintaining the contractor's reputation in the larger transit community. This reputation is important when the contractor seeks new business.

PERFORMANCE AND OPERATIONS

Service Performance

This section reviews Open Door performance using standard paratransit measures.

Productivity—Passenger Trips per Revenue Hour

Passenger trips per revenue hour measures the productivity of a paratransit system. Many consider this the most important measure of paratransit performance as it is a key determinant of service cost.

As a performance measure, productivity captures the ability of the paratransit service to group trips: to schedule and serve passenger trips with similar origins, destinations, and time parameters, using the least number of in-service vehicles and revenue hours. This is the essence of shared-ride, public paratransit service.

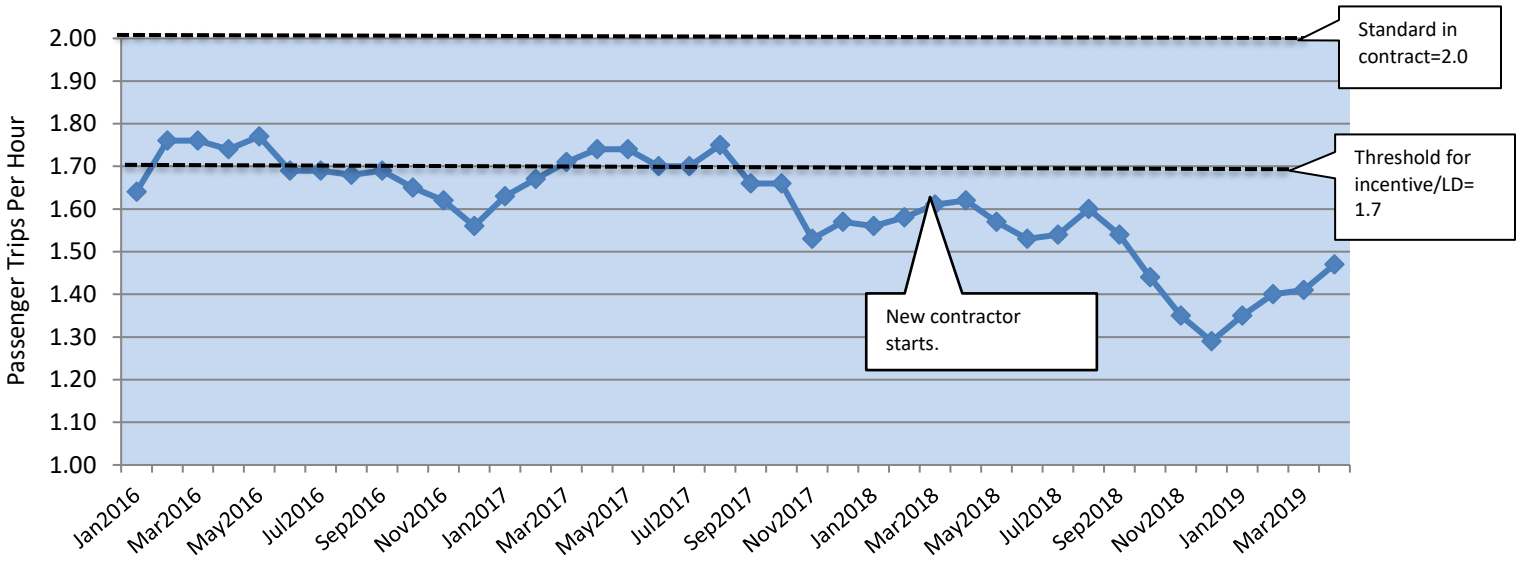
Various factors affect the ability of a paratransit service to be productive, including the size of the service area, distribution of residential areas and destination areas, and the length and patterns of riders' trips. If the service area is large and passengers request trips to disperse destinations, it will be harder to group trips and this will mean a lower productivity. From a performance perspective, the emphasis on productivity stems in great part from the fact that small changes in productivity can be very cost effective.

Open Door's productivity averaged 1.69 during 2016 and 1.67 during 2017, nearly reaching the 1.7 productivity threshold. Average productivity went down to 1.52 during 2018, and for the first third of 2019 is down to 1.41; see Figure 1. Productivity has never achieved the 2.0 standard stated in the contract during the time period analyzed for this study and has not achieved the 1.7 level, below which penalties are applied, since August 2017.

It is likely that the emphasis on improving on-time performance since late 2018 has impacted productivity. Additionally, as noted earlier, moving ambulatory subscription riders to taxis has impacted productivity.

Data for Open Door can be compared to that of paratransit services operated by representative transit agencies documented in research from 2008 (*1*). For transit agencies serving areas with populations between 200,000 and up to one million, productivities ranged from 1.8 to 2.6 passenger trips per revenue hour, with five transit agencies reporting. For agencies serving urban areas of one million population and larger, productivities ranged between 1.3 and 2.3, with eight transit agencies reporting. IndyGo's service area population is close to one million, so it may be appropriate to consider Open Door's performance relative to that of transit agencies in the larger population category. In that case, Open Door's productivity is within the experience of the larger transit agencies.

Figure 1: Productivity (Passenger Trips per Revenue Hour)



On-Time Performance

On-time performance (OTP) is perhaps the most important measure of service quality from a paratransit rider's perspective. It measures whether the rider's vehicle arrives within the promised "window of time" for the pick-up. For shared-ride paratransit service, the window is typically 30 minutes framing the scheduled time for the rider's pick-up.

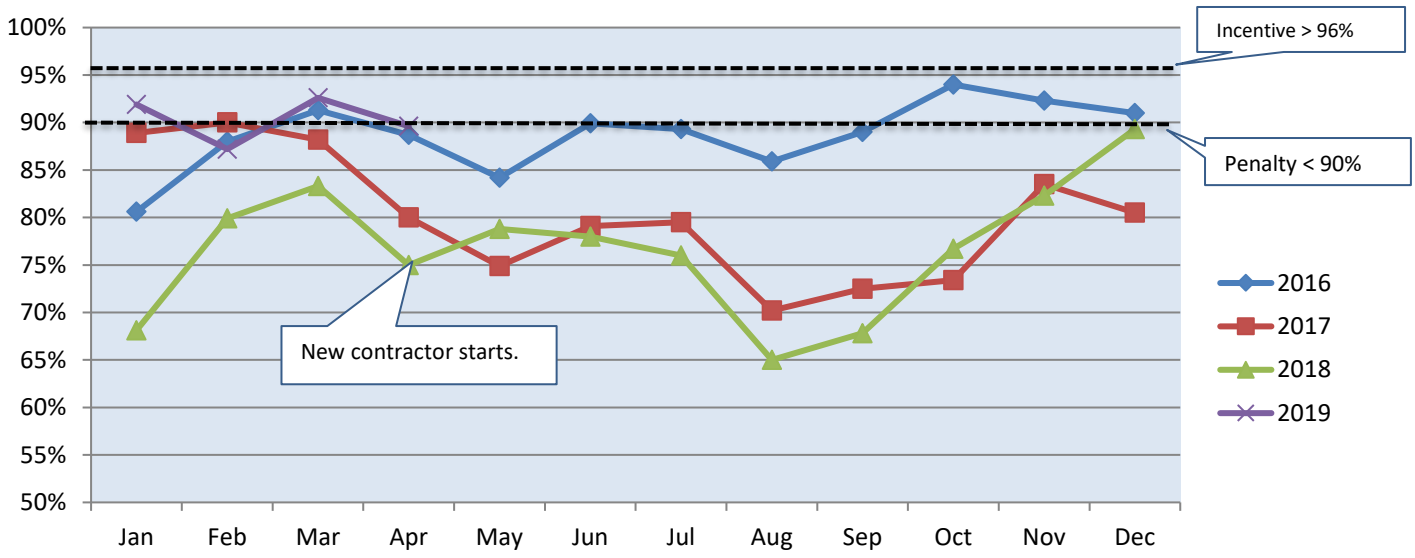
The on-time window can be operationalized in a number of ways—15 minutes before and after the scheduled time; 0 minutes to 30 minutes after the scheduled time; and, for Open Door, the window is 5 minutes before to 25 minutes after the scheduled time. What is critical for riders to understand is that the vehicle can arrive *anytime* within that 30-minute timeframe and it is considered on-time; the *scheduled time* is no longer relevant in terms of Open Door's performance.

On-time performance demonstrates the reliability of the service: does the vehicle arrive when promised? Timeliness is also important for time-sensitive trips, such as to work or a medical appointment: does the vehicle arrive at the destination so the rider is on time for work or the appointment? Transit agencies have typically focused on timeliness at the pick-up end, based on the wording of the ADA regulations.

Open Door's OTP has received considerable attention, particularly after the transition to the new contractor in 2018. Data from the early months of 2019 show improvements in OTP, with monthly figures reaching the 90% level. During our study outreach, we heard comments that recognized OTP improvement at the pick-up end, but concerns about timeliness at the destination end were voiced.

Figure 2 shows OTP data (for pick-ups) from January 2016 through April 2019, the period assessed for this study. The yearly comparisons demonstrate that OTP tends to dip a bit during the summer months. (Note that more recent data from May through August 2019, beyond the time period analyzed for the study, shows this same dip during the summer months of July and August.)

Figure 2: On-Time Performance

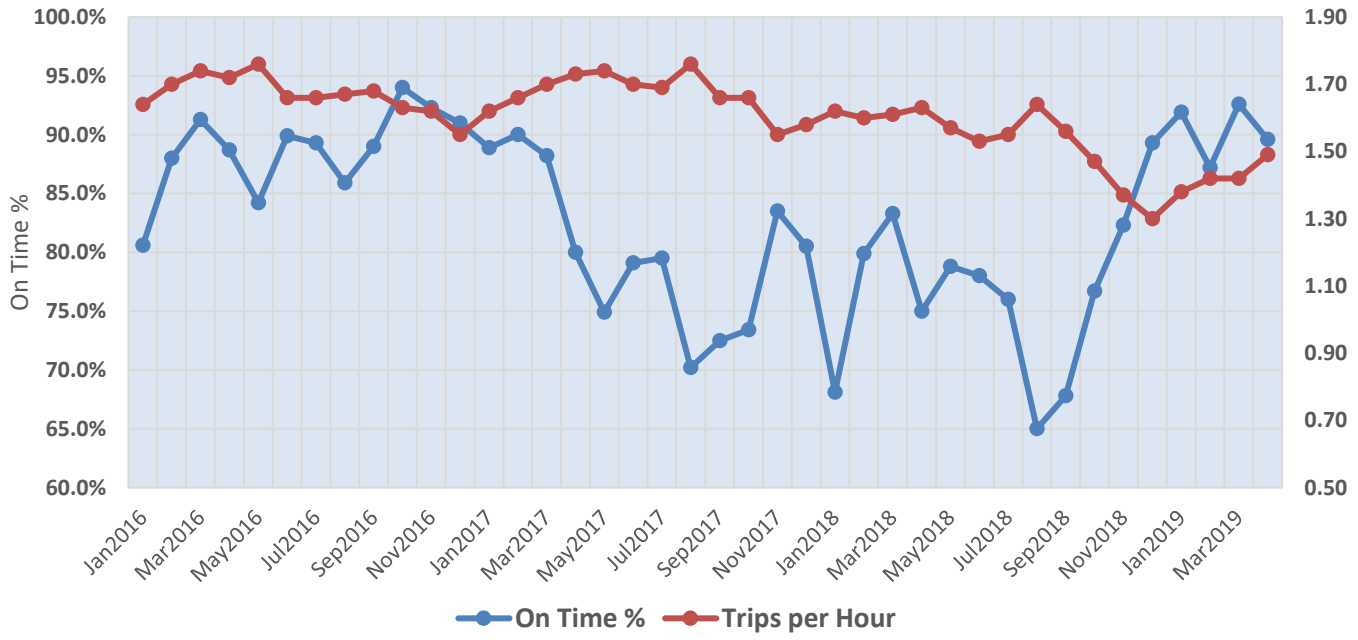


On-time performance can also be assessed in relation to productivity. Balancing OTP and productivity—between service quality for riders and cost efficiency—is a key objective for paratransit. An emphasis on OTP can impact productivity and the reverse is true—an emphasis on productivity can impact OTP. If, for example, scheduling practices group too many passenger trips each hour of service, the reality of the day-of-service may result in trips falling out of their on-time windows.

The relationship between OTP and productivity for Open Door can be seen in Figure 3. Data for several months in late 2016 and early 2017 show that the service can achieve both a relatively high OTP and a relatively high productivity. The prior contractor came close to IndyGo's standards during that period. By April 2017, OTP began to suffer, though productivity remained between 1.6 and 1.7 through the remaining months of the prior contractor's term.

After the new contractor's problematic first seven month of service related to OTP, trip timeliness began to improve, but at the expense of productivity. In December 2018 and through the first four months of 2019, OTP was close to or reached 90% but average productivity during those five months was only 1.38, almost 20% lower than the 1.7 standard.

Figure 3:
Open Door On-Time Percentage vs Passenger Trips per Hour,
Jan 2016 - April 2019

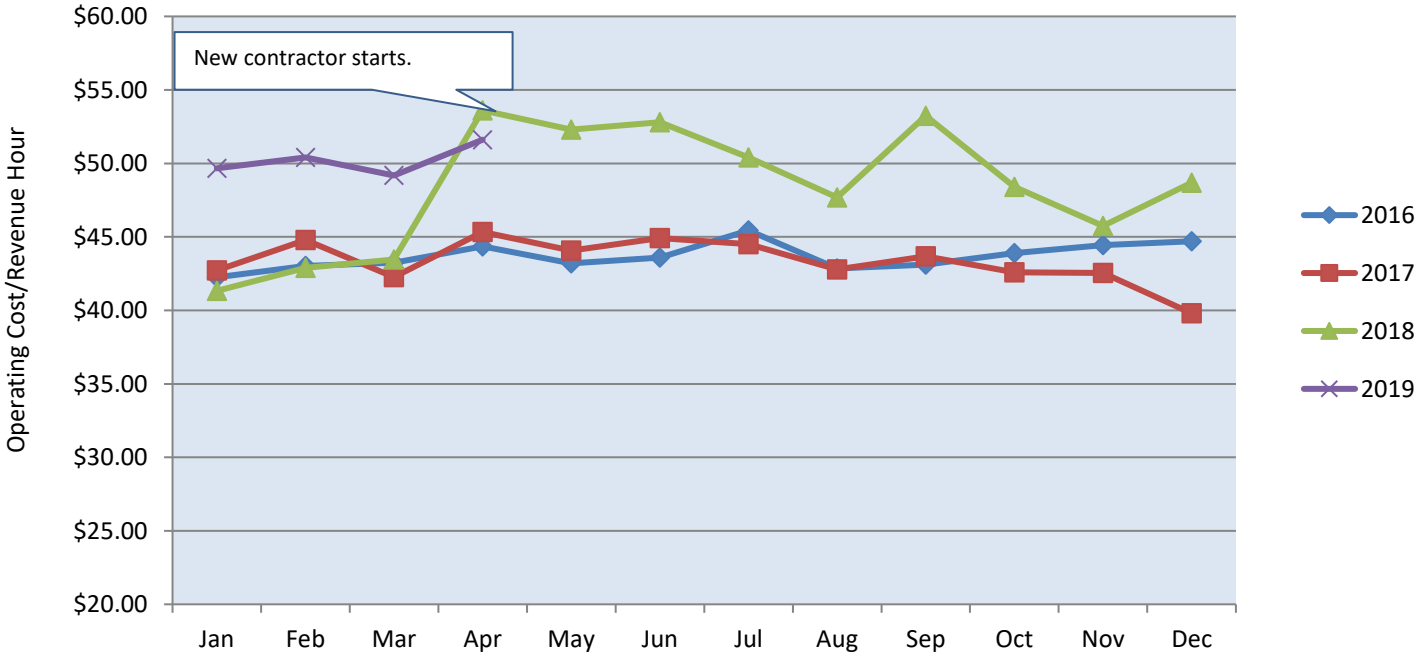


Operating Cost per Revenue Hour

Operating cost per revenue hour assesses the financial resources needed to produce a unit of service, defined as an hour of revenue service. What does it cost the transit agency to provide paratransit service on the street?

Data for Open Door was calculated based on the monthly invoice amount and monthly revenue hours. As shown in Figure 4, there is an upward trend in the cost per revenue hour since the contractor transition. Impacting the data are the rate charged per revenue hour, which increased 3.1% from the prior contractor's final contract year to the current contractor's first year, and the liquated damages assessed each month which reduce the monthly invoice.

Figure 4: Operating Cost per Revenue Hour

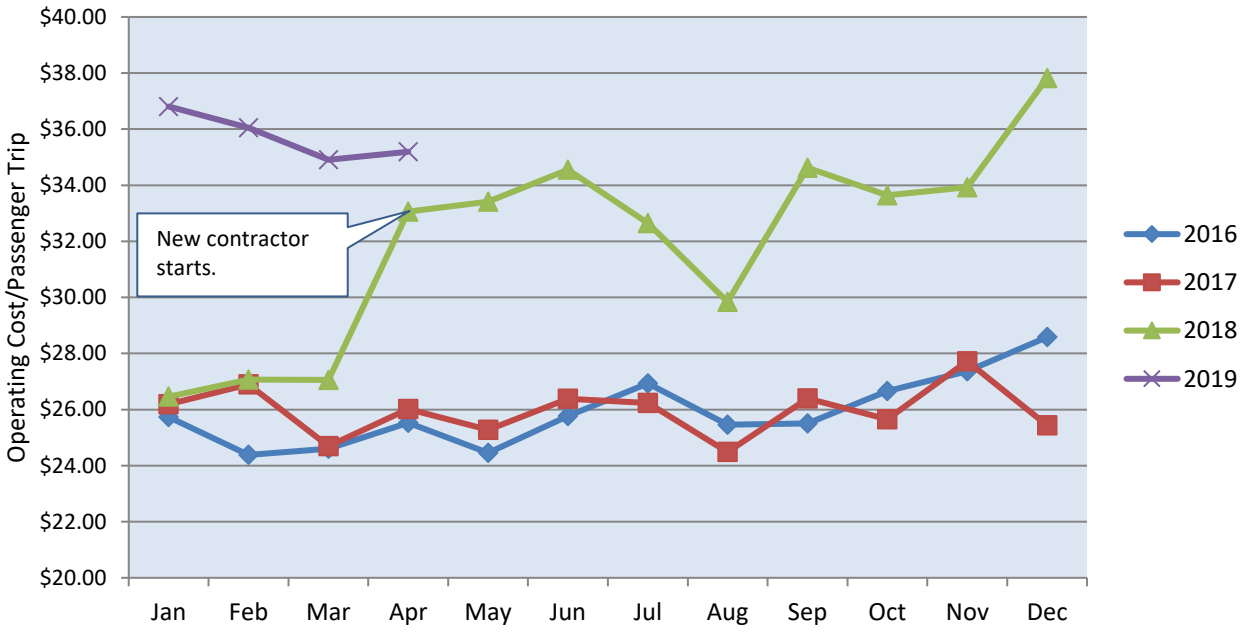


Operating Cost per Passenger Trip

Operating cost per passenger trip is a key cost-effectiveness measure. It combines elements of the two other measures —*operating cost* per revenue hour and *passenger trips* per revenue hour, relating productivity to the hourly operating cost.

As a composite measure, a paratransit service may have low operating costs but if productivity is also low, the operating cost per passenger trip may be high. Conversely, a paratransit service may have a relatively high cost on a revenue hourly basis, but if its productivity is high, cost per passenger trip may be low. Operating cost per passenger trip is important because it examines a paratransit service's ability to carry out a core function—that is. transport passengers in a cost-effective manner. Data for Open Door is provided in Figure 5.

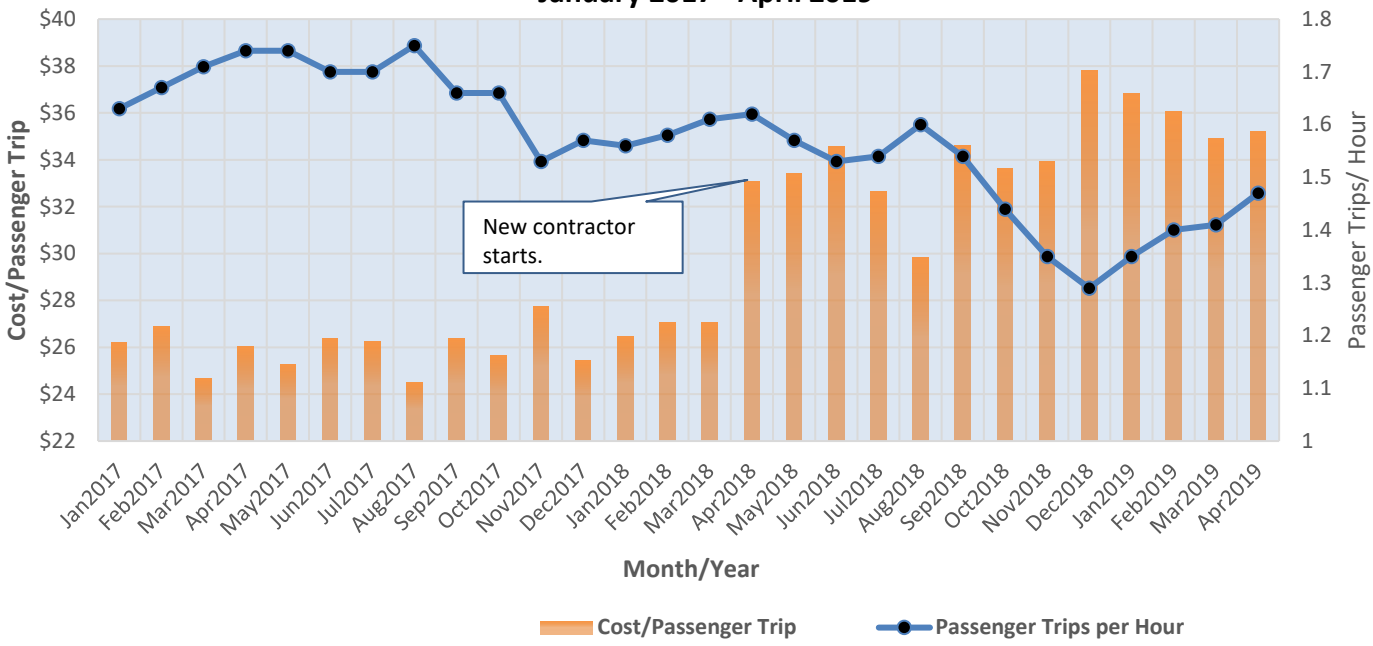
Figure 5: Operating Cost per Passenger Trip



The cost per passenger trip is directly related to the productivity of the paratransit service. This can be seen in Figure 6, providing data from January 2017 through April 2019. Months with higher productivity feature a lower cost per passenger trip, such as the first half of 2017. Conversely, when productivity is low, the operating cost per passenger trip in higher—December 2018 and the first couple of months in 2019 demonstrate this.

Data for August 2017 are interesting: Figure 6 shows a high productivity and low cost per passenger trip, yet this was a month with poor on-time performance.

Figure 6: Operating Cost/Passenger Trip vs. Passenger Trips per Revenue Hour
January 2017 - April 2019



Trip Length

The length of riders' trips has a direct impact on productivity as well as ride times. With data on annual passenger miles from Trapeze reports and passenger trip data, the average trip length can be computed for 2016 through 2018; see Table 1. Average trip lengths have increased somewhat in the three-year period and are likely having a downward impact on productivity.

Table 1:
Open Door Trip Length

Year	Average Trip Length (miles)
2016	10.6
2017	10.7
2018	11.0

Missed Trips

The missed trip rate measures the percent of trips that are not completed because the paratransit vehicle fails to arrive at the scheduled location, or the vehicle arrives late and the rider declines to take the trip or is not even there anymore.

A review of the missed trip rate for Open Door shows a slightly higher rate in the winter months, which is not unexpected. The data show also show that the current contractor is experiencing a higher rate of missed trips than the previous contractor; the previous contractor had a 0.5% missed trip rate, averaged over 27 months, while the current contractor's rate is twice that, at 1.0%, averaged over 13 months. The rate has improved in recent months, reflecting improved on-time performance.

The current contract penalizes the contractor for every missed trip. As noted earlier, more typical in the industry is to allow a very small percent of missed trips before liquidated damages are applied, for example, the standard might be no more than 0.5% to 0.75% missed trips.

No-Shows

No-shows need to be monitored because of their negative impact on productivity and operating costs. While some degree of no-shows is inevitable with a paratransit service, transit agencies need to adopt and enforce a no-show policy to minimize no-shows as they are essentially wasted resources.

Monthly data for Open Door since 2016 indicate a no-show rate that is consistently less than 4.0%, although the rate for the current contractor is just slightly higher than the previous one. Transit agencies typically try to keep the no-show rate less than 3 to 4%, with IndyGo's experience consistently less than these rates over the three and one-third years reviewed for this study.

Open Door No-Show Policy

No-shows, cancels at the door and late cancellations (less than 2 hrs. before the scheduled pick-up time) that equal more than 11% of a rider's trips within a calendar month incur a penalty. Missing 4 or more trips in a month, regardless of the monthly percentage, incurs a penalty. Penalties begin with a 5-day suspension of service for the first penalty in a calendar year and then progressive up to a 30-day suspension for a fourth penalty. Beyond that, penalties are determined case-by-case by the Appeals Committee.

Performance in ADA-Required Area vs. Beyond-ADA-Required Area

Service performance is impacted by the larger-than-required service area, and performance can be examined for service within the required ADA area versus service outside.

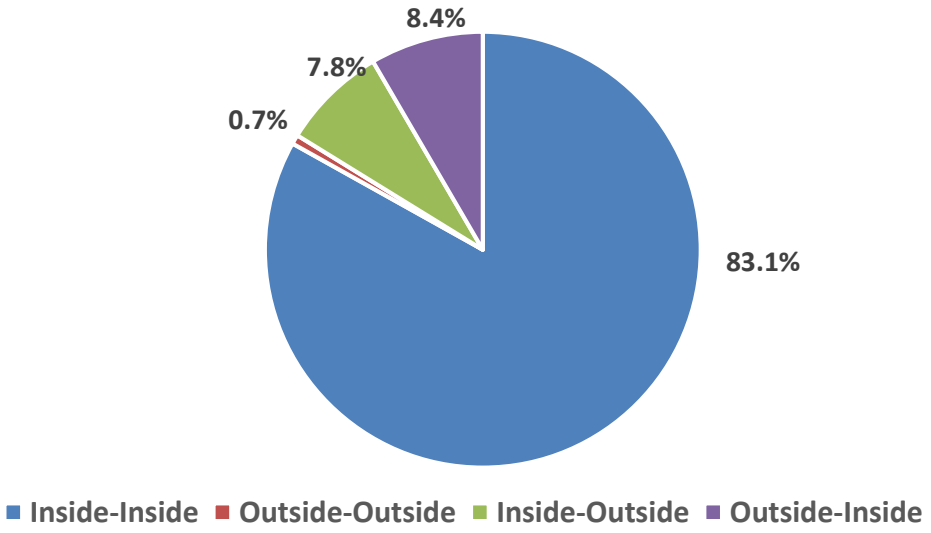
Passenger Trips Within and Outside ADA Service Area

All completed Open Door passenger trips for the first quarter of 2019 (1/1/2019 to 3/31/2019) were analyzed and categorized based on location of their origin and destination relative to the ADA service area.[4]

For the three months assessed, the analysis finds:

- A total of 69,212 passenger trips were completed
- 1,751 ADA riders completed trips; of these 200 (11%) had a home/origin location outside the ADA area
- Of all completed trips, 11,698 (17%) had one or both trip ends outside the ADA service area; see Figure 7:
  - 83.1% had both origin and destination inside the ADA service area
  - 8.4% had an origin outside and destination inside
  - 7.8% had an origin inside and destination outside
  - 0.7% had both origin and destination outside

Figure 7:
Percent Passenger Trips Completed vs. ADA Service Area



[4] Note that the three-month time period analyzed may or may not be representative of the entire year, given that paratransit ridership has a seasonal pattern.

The categorized passenger trips were reviewed for trip length (distance) and ride times; see Table 2. These data represent the actual distances that passengers traveled on Open Door from their trip origin to their destination and the time spent on the vehicle for those trips.

As shown in the table, the trips with longer average length and ride times were those with an origin or destination outside the ADA service area, while interestingly, trips with *both* the origin and destination outside the ADA service area were the shortest.

The data show that trips within the ADA service area are on average more than two miles shorter than ones with an origin or destination outside, with shorter ride times. The analysis also indicates that the large majority of trips are less than 60 minutes. Given input from riders about long ride times, the share of trips longer than 90 minutes was assessed, with the data showing small proportions in each category of trips. There is a slightly higher proportion of long trips with an origin inside the service area and destination outside.

Table 2: Average Trip Length and Ride Time by Origin and Destination vs. ADA Service Area

ADA Service Area	Average Trip Length (miles)	Average Ride Time (minutes)	Percent of Trips			
			< 60 (min.)	60-89 (min.)	90-119 (min.)	120+ (min.)
Inside-Inside –origin and destination inside ADA service area	7.6	39	81%	14%	4%	1%
Outside-Inside – origin outside ADA service area and destination inside	10.2	44	75%	18%	6%	1%
Inside-Outside – origin inside ADA service area and destination outside	9.7	46	73%	18%	6%	3%
Outside-Outside – origin and destination outside ADA service area	4.8	23	95%	3%	2%	<1%

The trips were further assessed as to timeliness, including timeliness for trips booked to an appointment time. These latter trips are time-sensitive trips. As noted earlier, according to input from stakeholders and riders, late trips are more of a problem for time-sensitive trips. Our analysis supports this: the on-time performance at the destination end for time-sensitive trips is below the contract standard, which is 95% of trips must arrive at the destination by the agreed-upon time. Late drop-offs are particularly an issue for trips that begin outside the service area and travel to a destination inside; see Table 3 on the following page. Typically, a 30-minute window is used for arrivals for trips booked to appointment time. There are settings that can be used to enforce this scheduling requirement but they are presently not enabled for Open Door.

Table 3: Trip Timeliness by Origin and Destination vs. ADA Service Area

ADA Service Area	Completed Trips	On-Time Percent at Pick-Up	Percent Trips Booked to Appointment Time	On-Time Percent at Drop-Off
Inside-Inside –origin and destination inside ADA service area	57,514	90.7%	15.3%	81.4%
Outside-Inside – origin outside ADA service area and destination inside	5,810	90.1%	22.9%	78.7%
Inside-Outside – origin inside ADA service area and destination outside	5,399	91.5%	4.4%	90.1%
Outside-Outside – origin and destination outside ADA service area	480	94.6%	1.2%	84.7%

Booking trips by appointment time is an attractive option from a customer service standpoint, because the rider generally gets a shorter ride time as the scheduling system accommodates both an on-time pick-up and an on-time arrival at the destination. This experience is often enhanced by a requirement that the rider cannot arrive at their destination more than, say, 30 minutes before the scheduled appointment time.

For example, if a doctor's office opens at 9:00 a.m., the rider may not be able to get into the building before 8:30 a.m. or 8:45 a.m. so will not want to alight from the vehicle, especially in inclement weather. However, it should be noted that booking a significant number of trips by appointment time reduces opportunities for shared rides and therefore productivity is impacted. This is because the scheduling system is constrained by the requirement to both ensure the vehicle arrives within the pick-up window at the origin as well as the drop-off window at the destination. The large transit agencies in Baltimore and Washington, D.C. have seen a steady increase in the number of trips booked by appointment time over the past several years, and that practice is likely having a negative impact on productivity. While the overall number of Open Door trips are not booked to appointments, Table 3 shows that the highest percentage of trips booked by appointment time are ones with an origin outside the service area and a destination inside. Perhaps not surprisingly, the on-time performance for that category is also the lowest at 78.7%.

Summary

Based on the time period reviewed for this study—January 2016 through April 2019—Open Door's overall performance has generally not reached the level seen during 2016 and part of 2017. Notably, the important measure of performance from the riders' perspective—on-time performance, as measured at the pick-up—has improved since December 2018. The improving on-time performance has likely impacted productivity, which has decreased since late 2018 and through April of 2019. Also impacting Open Door productivity is IndyGo's transition of ambulatory subscription riders to the taxi voucher program, which began in the late summer of 2018.

The lower productivity figures also affect the cost per passenger trip, which averaged $35.74 for the first four months of 2019. While data show improved on-time performance, stakeholders and Open Door riders provided numerous comments about late trips for those that are time-sensitive. There were also numerous comments about long ride times.

ADA requires a high level of performance through the prohibition of capacity constraints. This means that there can be virtually no trip denials, high levels of OTP must be maintained, ride times should be comparable to fixed route trips, and telephone capacity for trip reservations must be readily provided.

The ability to meet the performance levels expected for ADA paratransit is impacted by the fact that Open Door serves all of Marion County, a service area that spreads over 400 square miles and exceeds the required ADA service area by close to 50%.

Performance for trips within the ADA required area versus trips with one end outside was assessed for a three-month period (January through March 2019). Of a total 69,212 completed passenger trips during that time, 17% had an origin or destination outside the required area and 200 of the 1,751 ADA riders over the three months had an origin address outside the required area. Of the 17% of trips with one end outside the ADA required area, half were trips with an origin outside the area going to a destination inside. Just less than half were the opposite—trips with an origin inside the service area and going to a destination outside. Remaining trips with both ends outside the ADA area were a small portion.

The analysis shows that trips within the ADA area are on average more than two miles shorter than those with one end outside and have shorter ride times. The analysis also shows a slightly higher proportion of 90-minute and longer trips are those with one end outside the ADA area, particularly trips going from inside the service area to outside.

The analysis reviewed timeliness of time-sensitive trips, that is, trips booked to arrive at an appointment time and found differences in the trips relative to the ADA service area. Trips with an origin outside the ADA area going to a destination inside had the highest proportion of trips booked to appointment time at 23% and, of these trips, 79% arrived within a 30-minute on-time window.

Providing ADA paratransit service beyond what the ADA requires is referred to as *premium service* by the FTA and includes, for example, same-day trips, "will-call" trips, and trips beyond the required service area. It is a local decision whether a transit agency provides premium service but the FTA provides cautionary advice for agencies that decide to do so: providing premium service should not adversely impact service quality for the service within the required ADA service area.

Exceeding Minimum ADA Requirements: Premium Service

"It is important to ensure that providing premium service does not lead to lower service quality for riders using the regular complementary paratransit service. For example, providing trips beyond the minimum service area is inadvisable if doing so might limit the service quality for trips within the 3/4-mile service area."

FTA Circular 34710.1 Americans with Disabilities Act (ADA) Guidance, Federal Transit Administration, 11-4-2015.

Use of Technology

Scheduling/Dispatch Software

IndyGo has used Trapeze PASS for its computerized paratransit software for a number of years but is planning to transition to RouteMatch by the end of this calendar year (2019).[5] Several issues with current use of the software have been identified. These include software and in-vehicle technology system maintenance, user management, and more recently, clarification of roles and responsibilities for operational functions.

Perhaps the most significant challenge facing the contractor and its use of Trapeze and the TransitMaster ITS system is that the staff is using older versions of the software. There are a number of functions and features in newer releases which would improve the performance and utilization of the software. However, because a decision was made to stay on existing hardware, operating system, and database management systems, there is no path forward for upgrading. The versions in use, while still supported, no longer receive updates and are essentially "frozen" for improvements.

One example of how using older software versions impacts operations is with the TransitMaster system and how updates from the vehicle are communicated to the dispatch center. In the software version currently in use, vehicle arrival and perform times are sent together, so there is a delay in real time information to dispatch. The driver arrives and presses the arrive button on the MDT, then starts loading the rider. Dispatch is unaware of this, so as each minute passes, assumes the vehicle is still en-route. Because decisions in real-time are so critical to a paratransit operation, this can result in unnecessary trip movements or additional radio calls to confirm status. In newer versions of the software, the arrive information is transmitted immediately and thus avoids the potential for inaccurate display of projected late trips to dispatch.

Another example of challenges resulting from use of the older version of the software is lack of Trapeze's "Pending List" feature. This was a new feature introduced in 2014 and provides reservationists with a tool to reduce peak time demand by offering a negotiated solution within the ADA- allowed scheduling window when trip capacity has been reached. Because capacity denials are not allowed in ADA paratransit, if a reservationist faces a situation where no scheduling solutions are found by the software, they often save the booking at the time the rider requests.

The effect of this is a high number of trips at peak time, for example, 3:00 p.m. In order to mitigate this, IndyGo reservationists have been instructed to offer riders other times, however, those other times are not obtained through an automated method. The consultants heard from riders—and witnessed in the control center—that sometimes riders are offered

[5] Note that following the submittal of the draft version of this report, IndyGo has indicated that it has postponed a decision on a transition of the Open Door scheduling software.

trip times outside the allowable ADA scheduling window of one hour before or after the rider's request time. The Trapeze "Pending List" feature will only offer times within the allowable scheduling window and, further, will provide the reservationist with the most desirable time in that window.

While on-site in June 2019, we heard from the contractor that approximately 30% of the vehicle fleet (22 units) did not have working MDTs. The contractor's general manager indicated this was because of the recent loss of the services of an IndyGo MDT technician, who previously came to the Transdev garage on nights and weekends to fix problems with the TransitMaster in-vehicle units. Without the MDTs, which provide one of the most critical parts of the operation, the ability to send and receive trip information in real-time is severely hampered; all updates regarding trip status must therefore be communicated by voice. Because the radio system is integrated in the MDT infrastructure, voice communication can also be affected, so the contractor has provided drivers with push-to-talk (PTT or "chirp") cellular devices. Unlike fixed route where voice communications are important but not critical to the operation of service, highly dynamic paratransit operations are heavily reliant on the ability to communicate—preferably using data via MDTs—but at a minimum by voice.[6]

Good dispatching, which relies on proper technology tools (MDTs or similar mobile technology) is critical to balancing service quality (on-time performance) and service efficiency (productivity). Without proper tools, the dispatch function is compromised. Recent research on ADA paratransit found a consensus among the transit agencies surveyed that effective dispatching is a key function that can positively impact both on-time performance and productivity. And without effective dispatching, even a good schedule can unravel (*2*).

The announcement that the TransitMaster and Trapeze systems are being replaced came as a surprise to the consultants but did help to explain why these systems have not been maintained recently. A transition to new scheduling/dispatch software provides the opportunity for disruption. As discussed in the Task 1 Report, a successful transition is predicated on excellent preparation and training, strong involvement in the design and planning of the implementation by those using the software (i.e., the contractor), and comprehensive testing. It is also important to have a full understanding of the expected results— meaning that the new scheduling system may or may not have the same features or capabilities of the replaced system.

[6] The contractor reports that IndyGo is now providing more timely MDT maintenance.

Other Transportation Technology

The advent of transportation network companies (TNCs) has introduced technology features popular with riders, particularly those available with a smartphone. Input from stakeholders and riders through our study outreach efforts suggests that some of these features would improve Open Door service. For example, delays in pick-up times could be communicated in real time to riders through their smartphones. This would eliminate the need for riders or caregivers to try to phone the contractor's dispatch for information, and it would give riders some certainty that the vehicle would be arriving, albeit late.

Technology companies that provide paratransit software are experimenting with new features. RouteMatch is piloting a feature for a paratransit program in Virginia that shows the estimated time of arrival (ETA) of a rider's trip on the rider's smartphone. However, as currently configured, the ETA is not linked to the paratransit driver's manifest so it does not take into the calculation the time that could be needed to pick up or drop off another rider on its route. Thus, the ETA communicated to the rider suggests an earlier arrival than is the case.

Call Center/Control Center Operations

The consultants observed call center and control center (dispatch) operations and found some issues with training, use of standard operating procedures, and effective use of the Trapeze software. Additionally, it was evident that some parts of the software—particularly the scheduling parameters—need review and probable adjustment.

Use of Trapeze—Reservation Agents

When booking trips for ADA riders, reservations agents routinely ignored the scheduling solution offered by the Trapeze system, unchecked the “SearchW” box and looked for and often accepted alternative solutions which were found at the riders’ requested pick-up times. While this practice is good for the riders (they get trips at the time they want), it indicates that either the default parameter sets used by the agents need to be reviewed because they are not providing the best solutions, or that the agents need additional training on trip scheduling procedures—or, and this is probably the case, both items need to be addressed.

When an agent answers a call, the agent asks the rider for their name so the agent can look up the rider in the database. There is nothing wrong with this approach but alternatives to rider lookup would result in reducing talk time and may be helpful.

For example, asking riders to use their unique ID when calling, or implementing computer telephone integration (CTI) application, which automatically presents the agent with the correct rider information in the scheduling system based on their phone number, can reduce call times by several seconds. Incrementally, this may not seem like a big improvement;

however, because the ADA has rather prescriptive requirements on telephone response time, the impact of shorter talk time can be significant in an operation of Open Door's size.

In a similar vein, several agents complained that a software issue with address lookups associated with riders' records was causing them to take longer than previously to book trips. The consultants learned that a month or so before arriving on-site, a major problem with the address-matching service had occurred and was reported as resolved. However, after the fix, the agents found that the lookup feature they were accustomed to using had been changed. This was causing the longer time for trip booking, but they had difficulty articulating this concern. And, because the original issue which had prevented them from being able to book trips was no longer a problem, the agents seemed to treat the changed process as an inconvenience and therefore it was not followed up.

This type of scenario is common in paratransit organizations where there is a physical or virtual separation of application users and the people who own the relationship with the software vendor (often the transit agency's IT department). The core issue here is that problems or concerns have to be relayed through a third party, and often key elements are lost in translation. The software vendor thinks the issue is resolved to the end user's satisfaction, and the end user is unwilling or unable to "go through the hoops" multiple times for true issue resolution.

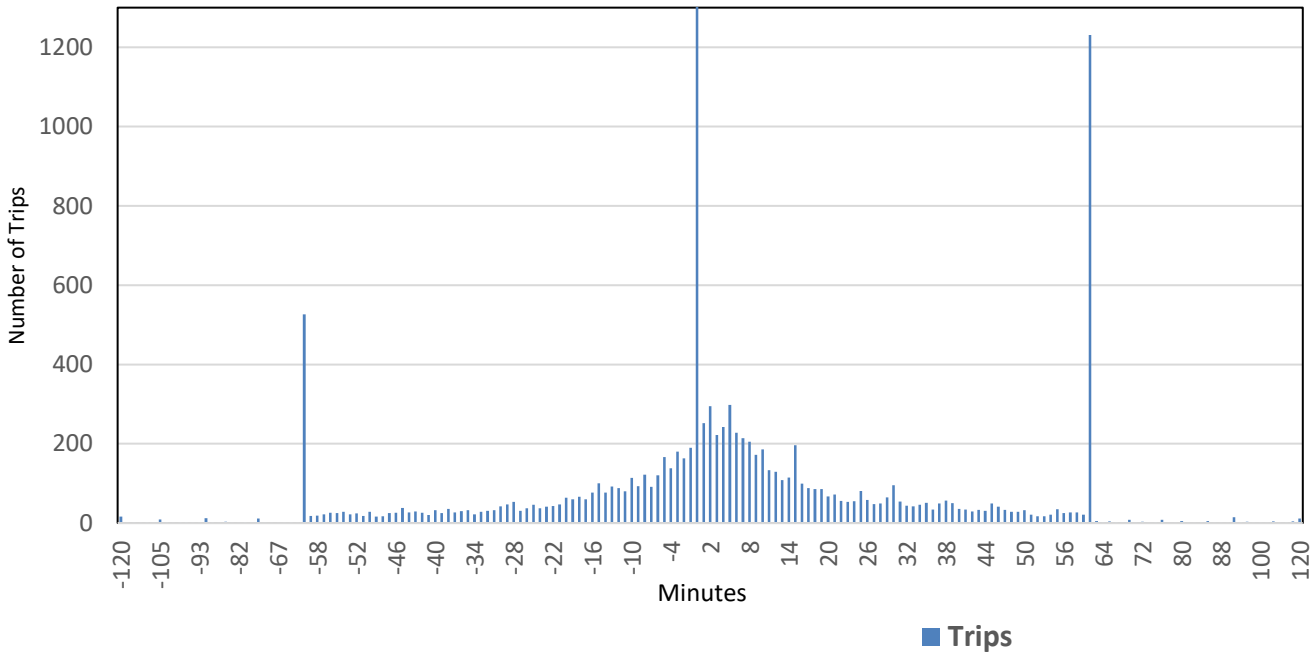
The Trapeze system is capable of automating the process of confirming whether a rider's trip request has an origin or destination outside of the service area (whether that area is strictly defined by an ADA polygon or, as in the case for Open Door, more generally allowed in Marion County with a few exceptions into neighboring counties). However, Open Door agents used the map display in Trapeze to make determinations of whether trips are in or out of the service area while booking a trip. While this approach can work, it also has the potential to lead to mistakes and/or longer talk times as the agent has to perform additional review of the booking details on the map screen.

As mentioned earlier in the Scheduling/Dispatch Software section, the consultants noted the reservation agents' procedures when negotiating times with riders in those situations where the Trapeze system was not able to find scheduling solutions. The riders were told that if they refused the solution offered, the trip would be marked as a refusal and they could not call back to request the trip again. However, if the rider accepted the solution, they would be able to try again later.

In one example, the time offered was 70 minutes later than the rider's request time, which is a violation of ADA's trip negotiation rules. (In such case, the rider may want that trip but it should be marked as a trip denial, according to ADA regulations.) It was explained that this practice of making riders accept a solution was put in place to help reduce the number of rider call-backs.

Figure 8 is an analysis of completed trip data from Trapeze for the period of January 1 through March 31, 2019, showing the spread (in minutes) between *request time* and *negotiated scheduled time*. Of the total 69,212 trips during that time period, 58,741 (85%) were scheduled at the rider's requested time, with 526 (1%) scheduled one hour before and 1,231 (2%) one hour after. A small number (184 or less than one percent) were booked outside of the allowable negotiation window. The remaining 12% of the total trips were trips negotiated with the rider within either one hour before or one hour after the requested time, for example, 5 minutes after the requested time, 10 minutes before the requested time, etc.

Figure 8: Trip Counts By Negotiation Window (Minutes)



These data appear to confirm what we observed in the call/control center—that is, the reservation agents do not seem to be using Trapeze on a regular basis to negotiate scheduled times with riders but rather giving riders the times they ask for. The result is trip schedules that are not optimized, with trips bunched at the hour and half-hour time slots. On day-of-service, this bunching impacts the ability to meet OTP.

Use of Trapeze—Dispatch Function

Our review of the dispatch function in the control room identified issues relating to unclear roles and responsibilities, inconsistent or improper application of software tools, procedure knowledge and adherence, and customer service. Many could be addressed in the short term through additional training, minor adjustments to existing protocols and by allowing contractor managers more autonomy with the Trapeze system user and system properties.

The control room itself is a challenging environment, with a lot of equipment and people in a relatively small space. The cacophony of background noise makes communications difficult as dispatchers try to talk to each other and to riders on the phone, while also listening to radio traffic.

The consultants learned that there is a direct phone number into the dispatch center. We heard several riders use this direct number to find out "where's my ride?" and, in one case, to repeatedly call back to complain about the routing of his vehicle. Many of these calls are answered on speaker phone, which not only adds to the confusion of sounds in the room but also gives riders a direct ear to all the other activities in the room.

One recommendation is to have the dispatch phone number go through the IVR (interactive voice response) system and get answered either by dedicated "where's my ride?" staff or even reservations staff. In most cases, these types of calls do not need to be addressed directly by dispatchers. Another recommendation is for dispatchers to use headsets for their radio conversations.

Dispatchers were observed monitoring for late trips and then looking at the Trapeze Schedule Editor system for runs identified. One of the features of the Trapeze system in use at Open Door is the "InAvl Agent," which updates estimated times for future trips based on a vehicle's most recent locations. Prior to the InAvl agent, estimated times were only updated as of the last event's activities. So, for example, if a vehicle dropped off a rider, the time and location of the vehicle was used to update future events on the itinerary. If the driver encountered heavy traffic or some other factor which caused a delay, that information was not relayed to the system.

With the InAvl agent in place, the estimated time is updated approximately every 4-6 minutes as the vehicle is travelling between events. This provides for a better estimate of arrival times, and an "AVL Bar" event shows in the Trapeze Schedule Editor screen every time this update is received. Our review found that some dispatchers were deleting the AVL Bar events from the itinerary under the mistaken belief that the bars themselves were *causing* late trips instead of *indicating* late trips.

No-Shows and Cancels at the Door

One training issue is making sure dispatchers are actively monitoring driver requests for no-shows and cancels-at-the-door and responding to drivers immediately. The importance of managing these activities in a real-time fashion has a direct impact on on-time performance, and, in the case of a cancel-at-the-door, helps prevent wasting resources for return trips scheduled later in the day.

Also, complete procedure adherence and accurate documentation of no-shows and cancels-at-the-door are critical to ensuring riders are not stranded. This is also important for later use in the event a rider is warned or suspended because of policy violations. Through dispatch observations, we saw instances of drivers leaving the scene of no-shows, either because they did not contact dispatch for approval or because the dispatcher did not respond in a timely fashion.

Service Area Map

One consequence of accepting trips outside of Marion County is that the maps installed on the TransitMaster MDTs do not also include that geography. While on-site, the consultants observed dispatchers' attention being diverted because they had to give directions over the radio to a lost driver. Confirmation that the new ITS system maps are comprehensive is something that should be addressed as part of the system replacement.

Trapeze Templates—Personal Properties

There are a number of Trapeze user "Personal Properties" which, when applied consistently at the time a new user is added to the system, allow for a standardized application of various settings and options for that user. Often, a transit agency will develop a single template user account, or several templates based on job function. If the personal properties are not applied, or applied incorrectly, it can have a serious impact on the user's activities in the system.

An extreme example would be to give a reservations agent the scheduling template used by a same-day scheduler in an agency where the same-day scheduler routinely works with late trips. The reservations agent could then inadvertently book late trips. Other personal properties control the look and feel of the screens in the system, and one thing that managers need—especially in a control center—is the ability to look at dispatchers' screens and quickly identify particular activities based on the layout of the screen and the consistent use of background colors. It was apparent during the on-site visit that there is a lack of consistency in the application of personal properties for the contractor's staff.

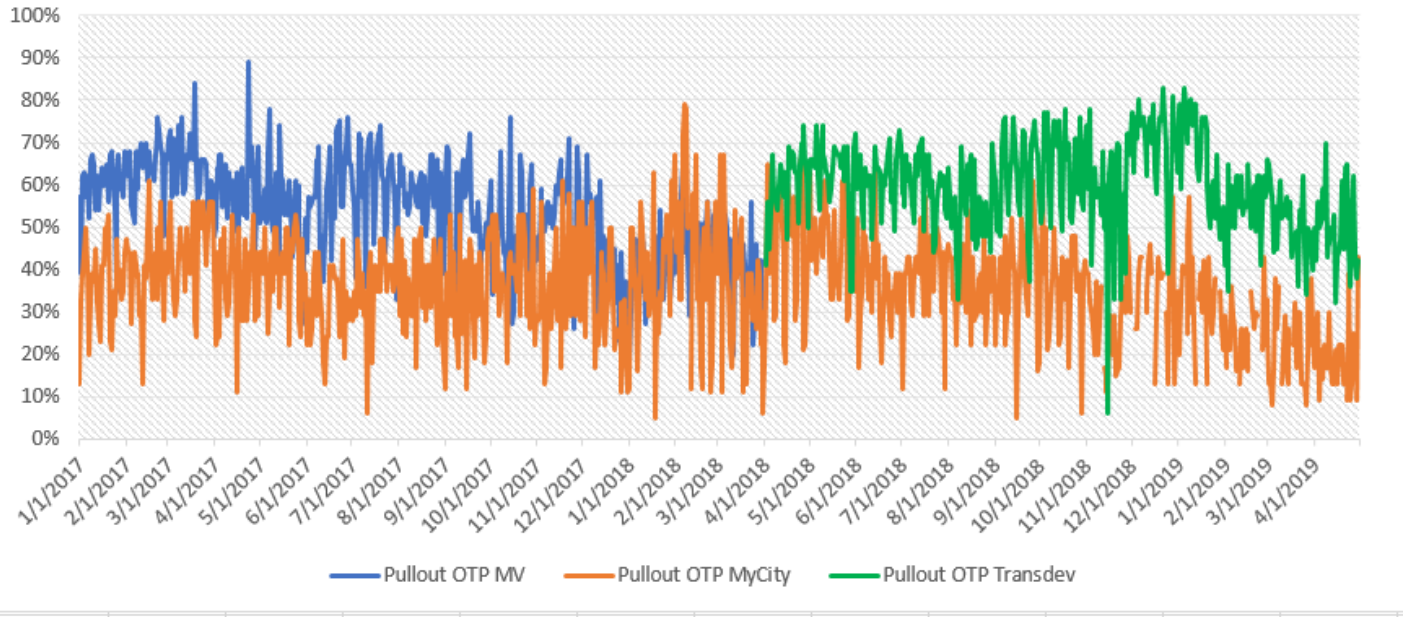
On-Time Performance for Vehicle Pull-Outs and at First Pick-Up

One of the areas reviewed after the site visit with respect to control center operations is on-time performance for pull-outs. This is an important metric and one which should be closely monitored on a day-to-day basis because all scheduling assumptions for the day are dependent on vehicles leaving the yard at the correct time. Once a vehicle pulls out late, there

is a domino effect on schedules for the rest of the day, and this translates to an increased number of trip movements and additional adjustments to manifests. Pull-out performance was reviewed for 2017, 2018 and part of 2019 and found to be relatively low but consistent, ranging on average from 53% to 60% on time. Late pull-outs is a focus area in the industry, with experience showing that it can be difficult to achieve a high on-time performance (90% or higher) for pull-outs.

Figure 9 shows the daily on-time performance for pull-outs by provider. Performance by the previous prime contractor dropped noticeably in the months leading up to the contractor change, and generally has been better with the new contractor. Also of note is that the on-time performance of the subcontractor, MyCity, has consistently been lower than that of Transdev over the review period.

Figure 9: Pull-Out OTP by Provider, January 2017-April 2019

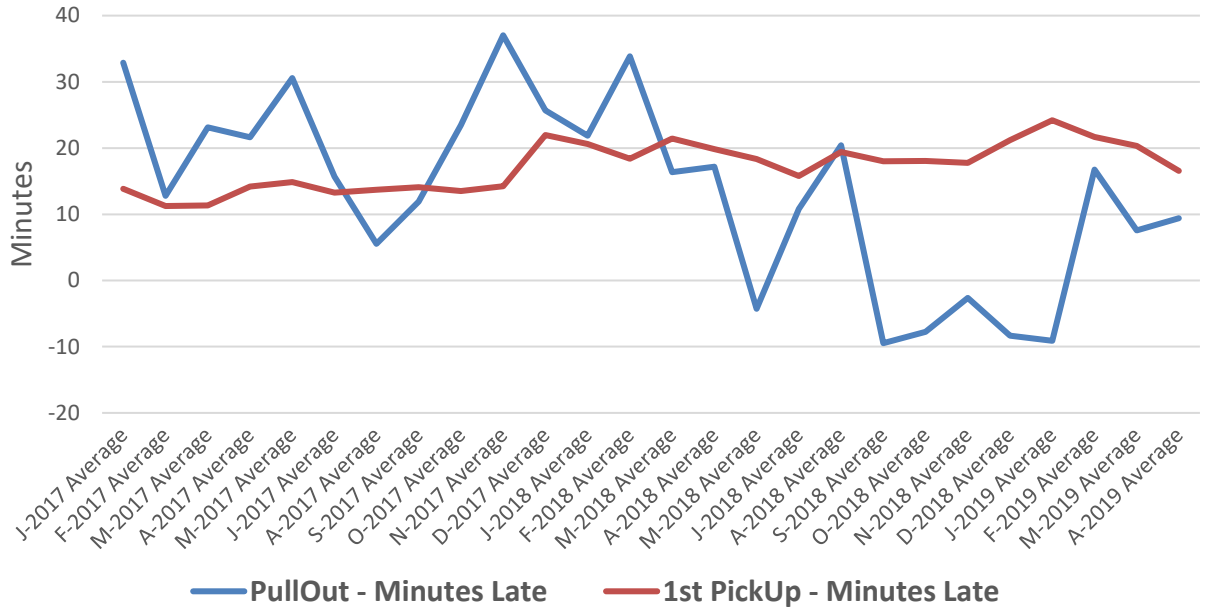


Another important metric to monitor is on-time performance to the first pick-up. This goes hand-in-hand with pull-out on-time performance as a good measure to help ensure the day starts off well. As before, data from 2017 through part of 2019 were reviewed, and Figure 10 on the following page shows that, on average, late first-trips ranged 11-14 minutes in 2017, were about 20 minutes in 2018, and have shown some improvement in 2019 with the contractor's focused attention on improving OTP.

One interesting note is that for the late to first pick-up trips for the fourth quarter of 2018, many of the runs actually pulled out early from the yard. While this could be an issue with the data, it is more likely an indication of an issue with driver conduct. Experience at other transit agencies is that drivers will sometimes pull out of the yard and then head to the nearest

convenience store to pick up a cup of coffee or chat before heading off to their first pick-up. This activity can be monitored either by checking the vehicle activity using the Trapeze Monitor feature or by street supervision. Data for the early months of 2019 showed improvement—with pull-outs more closely meeting first pick-ups.

Figure 10: Late to First Pick-Up



Our analysis of the data related to first pick-ups shows that the average distance to the first pick-up went down from about nine miles to about seven miles with the transition from MV, the previous contractor, to Transdev, supporting an assumption that Transdev's facility is closer to the core service area.

Contractor Access to Trapeze

While IndyGo has plans to transition to new scheduling software, use of the current software could be improved by providing the contractor's general manager more access to Trapeze and to the test environment. The manager is a former Trapeze employee with over a decade of experience managing paratransit installations across the U.S., and her knowledge and insight into improving some aspects of the operation through a better utilization of the tools and features in the software would benefit Open Door's operation. Aligning personal properties and adjusting scheduling parameters are just two items identified in this report that could be addressed with the contractor's administrative access to Trapeze and would yield improvements almost immediately.

Taxi Vouchers

IndyGo provides three taxi voucher programs: through a lottery, for dialysis riders, and for subscription riders. Such programs that rely on taxis' same-day, on-demand transportation, while specifically not a requirement of the ADA (and thus considered premium service), can provide cost-effective support for a transit agency, depending on their design. Taxis can provide riders an option for more spontaneous trips than available with advanced scheduled ADA service, while shifting trips from more costly ADA service; and they can meet trip demand on a same-day basis to help the ADA service maintain the strict performance requirements of the ADA.

Vouchers through the Lottery Program

IndyGo has provided taxi vouchers to Open Door riders since 2008 using a lottery system. Riders can apply for the vouchers once per month by providing IndyGo with credit or debit card information via telephone. Vouchers come in a set of ten that costs $35. ($3.50 per voucher is the same fare as one trip on Open Door.).

The phone orders are randomly selected after the 20th of each month and those riders who are selected are billed using the provided credit or debit card and mailed the set of vouchers. The vouchers were originally good for 35 days; however, that was changed in April 2019 and now vouchers are good for 65 days.

To use the vouchers, the rider contacts one of the three taxi companies that participate—Yellow Taxi, Airport Taxi or Triple A—to schedule a trip. One voucher is required for each one-way trip. The fact that the riders have a choice of taxi companies means that the FTA's drug and alcohol testing requirements do not apply.

For vouchers provided through the lottery, IndyGo initially provided a total of 640 per month, which was increased to 920 in 2013 and to 1,500 in 2018. This means that now 150 riders can obtain a set of ten vouchers each month. IndyGo reports that currently not all the vouchers are purchased each month. A recent month in early 2019 saw 110 riders purchasing vouchers. Of the total 1,100 vouchers available for that month (110 riders X 10 vouchers each = 1,100), 867 or 79% were redeemed.

Vouchers for Dialysis Riders

In 2018, IndyGo implemented a voucher program for Open Door riders traveling to and from dialysis treatment. These riders are significant contributors to trip demand, with trips to and from their required three-times-per-week treatment. Moreover, trips for these individuals can be problematic for ADA paratransit's advanced scheduled service, since the individuals are often not ready for prescheduled trips home due to complications from their treatment.

To help address issues with OTP experienced with the transition to the new contractor in 2018, IndyGo shifted some of these dialysis riders from Open Door to taxi vouchers. This

removed some of the trip demand from the contractor, while giving the dialysis riders access to on-demand trips, which is often a better transportation solution for these individuals.

To implement the program, IndyGo contacted a number of dialysis riders and asked if they would like to use taxis instead of Open Door. Currently, about 50 riders are enrolled in the dialysis taxi voucher program. Only one of the taxi companies provides the dialysis trips—Triple A.

A notable feature of the dialysis voucher program is the ability to electronically monitor use. Participating riders receive a sticker with a QR code that is placed on the back of the rider's Open Door ID card. Each time the rider takes a trip, the taxi driver scans the QR code with his smartphone and the trip record is sent to the taxi company's office. At the end of the month, the taxi company prints out the list of completed trips, including the trip information (e.g., rider's name and ID number, trip date, addresses of pick-up and destination, and times of pick-up and drop-off) and bills IndyGo for the trips provided.

Sample QR Code

The dialysis voucher program, provided by a taxi company that does not have any accessible vehicles, is unable to serve dialysis riders who use wheelchairs. Taxi subsidy programs supported with FTA funds are subject to the ADA equivalency requirements. This means that service for those who use wheelchairs is to be equal to those who do not. IndyGo should consider options to provide accessible service for the dialysis voucher program.

It is also noted that because the dialysis voucher program has only one taxi company participating, it is subject to FTA's requirements for drug and alcohol testing for safety sensitive employees (notably drivers). Where two or more taxi companies participate in a subsidized taxi program, those testing requirements do not apply.

Vouchers for Subscription Riders

IndyGo implemented a second voucher program in 2018, which is referred to as temporary. It is designed for subscription riders—those taking repeat trips each week to and from the same locations, for example, between home and work or between home and a human service agency.

IndyGo targeted these vouchers to ambulatory riders experiencing late trips during peak periods in the months when the contractor's on-time performance was poor. The intent of the vouchers was to "shave the peaks," shifting some of the trips from the contractor during high demand time periods to taxis. With somewhat less demand during the peak periods, it was expected that the contractor's OTP would improve. According to the data, it appears that this did occur. However, removing ambulatory trips from the peak periods impacted the contractor's ability to meet the productivity standard.

There are approximately 150 riders using these vouchers. Riders have been provided with an adequate number of vouchers for the one-way trips they need each month for their repeat trips, with a maximum of 40 per month.[7]

Payment for Voucher Trips

IndyGo pays a set price for each voucher that the taxi companies redeem— $26.50— regardless of trip length or meter cost. Reimbursement is the same for the three voucher programs.

The taxi companies have differing arrangements for paying their drivers. Yellow Taxi, for example, pays its drivers the meter amount and reports that the company generally breaks even between the short trips and the long trips. Triple A Taxi reportedly pays its drivers a set amount ($21) for each voucher trip, regardless of the meter cost.

Administration of the vouchers is considerably easier for the dialysis program with use of the QR code. Administration for the other two programs requires IndyGo to print paper vouchers and mail them to the riders. Used vouchers for the two programs are handled manually; staff of the contractor manually input the data into Trapeze for recordkeeping

IndyGo is working with Yellow Taxi and Airport Taxi, the two companies not using the QR-code system, so that they will also use the QR code process.

Costs to IndyGo for using the QR codes and electronic transmissions appear quite reasonable, particularly given the savings in administrative effort. There is a one-time set-up charge plus a monthly fee per voucher redeemed. The estimate for use of the QR code process for the subscription voucher program, which processes about 2,000 vouchers monthly, was less than $5,000 for the first year; this included the one-time fee of $1,600 for set-up.

Stakeholder Input on the Taxi Voucher Programs

According to our study outreach efforts, the taxi voucher programs are viewed very favorably. In particular, riders who use the vouchers for trips for their dialysis treatment are generally very pleased with the program. We also heard that there are additional dialysis riders who would like to use the taxi vouchers but they need an accessible vehicle. As noted above, Triple A, the only taxi company participating in the dialysis voucher program, does not operate any accessible taxis.

The input we received noted that some of the taxi drivers for the voucher programs do not provide adequate assistance to riders in getting into and out of the vehicle. There have also reportedly been occasions when a taxi driver does not accommodate a service animal. Unfortunately, the issue with service animals is common with taxi service in many communities.

[7] IndyGo is revising the subscription voucher program in the fall of 2019 so that the trips will be shifted back to Open Door.

Summary of Assessment

Vouchers through the Lottery Program

IndyGo began using taxi vouchers more than ten years ago through a lottery program that gives a limited number of randomly selected ADA riders a way to travel on a same-day basis. This program recognized that riders sometimes have more spontaneous trip needs than available through ADA paratransit's advanced scheduled transportation.

We note that the cost per each taxi trip through the lottery vouchers was set at the same price as Open Door—$3.50. Given that same-day trips are considered a premium service by the FTA since they are beyond what the ADA requires, it may be appropriate to charge more than the Open Door fare.

One approach to supporting taxi trips for ADA rider, which is used by a number of transit agencies with same-day taxi programs, is to provide the riders a set subsidy that they use for their taxi trips. When that set amount is reached on the taxi meter, the rider pays the excess. In this way, riders have some responsibility for the types of trips they take.

The subsidy amount can be set at a level the transit agency determines adequate, for example, $10, $15 or $20, ensuring the amount is less than the cost for an ADA trip. The subsidy amount can also be determined in relation to the length of an average ADA trip. For IndyGo, for example, the subsidy amount might equal the cost for a taxi trip of the same length as an ADA trip on Open Door. Our analysis of trips within the ADA required service area found that the average trip length is 7.6 miles. The cost for a taxi trip of this length, calculated as the average of what Yellow Taxi, Airport Taxi, and Triple A charge, is $18.36, without any waiting time charges.[8] This might be rounded up to $20.00.

We note that one of the major human service agencies in Indianapolis also subsidizes taxi trips with two programs, with trips costing more than $3.50. One program provides a limited number of vouchers each month at $6.00 for trips on a network of local providers including taxis. The second subsidizes half of the cost of taxi trips: eligible riders can request $50 worth of taxi transportation for $25.00 each month.

Taxi Vouchers for Dialysis Riders

The dialysis voucher program, currently available only to ambulatory dialysis patients, allows the patients to book same-day taxi trips. This is particularly helpful for dialysis patients due to characteristics of their disease and treatment. It is critical for patients to arrive on-time for their treatment; if they arrive late and start treatment late, the treatment schedule for the next patient is impacted, with a cascading effect throughout the day. Moreover, if they arrive late and have a prescheduled paratransit pick-up time for the return trip, they may ask to end

[8] Taxi company fare structures: Yellow--$3.00 pick-up fee and $2.00 per mile; Airport Taxi and Triple A--$3.25 pick-up fee and $2.00 per mile.

dialysis treatment early so they will not miss their ride home. Shortened dialysis treatments negatively impact patients' health. Once treatment is finished, dialysis patients are very weak and depleted; waiting for a prescheduled paratransit vehicle to arrive for the trip home and the shared-ride nature of the trip are difficult for dialysis patients and also can negatively impact their health. Subsidizing the use of taxis, with their ability to respond to trip requests in real-time and on-demand, can be an effective use of taxi transportation for dialysis trips, particularly return trips after treatment.

Taxi Vouchers for Subscription Riders

The subscription voucher program has been effective in helping the contractor improve OTP, particularly in the early months after the transition of contractors in 2018. However, IndyGo now faces not only the costs for this program that have grown since its inception, but the merits of paying for taxi vouchers for subscription trips so that the contractor can improve performance and avoid penalties.

The contractor has stated that the shifting of ambulatory subscription trips to taxis has impacted its ability to achieve IndyGo's productivity standard. However, should IndyGo consider sending those trips back to regular Open Door service, the contractor must provide adequate assurances that it can provide those trips in a timely manner.

What may be a more effective use of taxis for ADA service than the current voucher program for subscription riders is to contract with taxis to provide overflow trips, particularly during peak periods, or hard to serve trips that do not fit well with a pre-scheduled group trip. In effect, the taxis are extra resources that are called upon only when needed and helping Open Door service maintain OTP. Note that using taxis in such way would require that the drivers are included in FTA's drug and alcohol testing program. When taxi trips are scheduled and/or dispatched directly by the ADA provider (whether a public or private entity), FTA's drug and alcohol testing requirements apply. To facilitate this requirement for the taxi company, the taxi drivers who serve ADA trips could be included in the contractor's testing program. This would eliminate the need for the taxi company to set up and administer a compliant testing program.

Assuming IndyGo continues to use taxis to support Open Door service, two suggestions are provided that might help improve the quality of the taxi service:

- IndyGo, in coordination with other organizations in the community that use taxi vouchers for client transportation (e.g., CICOA), could develop a short "introduction to serving people with disabilities" training session for taxi drivers. This brief session, perhaps no longer than one hour, would be offered to the taxi companies that participate in the various voucher programs. Since taxi drivers are independent contractors, attending the session would be voluntary. However, those who do might receive a certificate and perhaps a decal they could affix to their vehicle that

demonstrated their attendance at the session. The decal would serve as a type of "good housekeeping seal of approval."

- IndyGo might sponsor a "taxi driver of the quarter" award program, whereby riders, caregivers and directors of organizations serving people with disabilities would send in their nominations for the award. The winning driver could be recognized in some way, through the MAC and IndyGo and possibly through a local community newspaper. We would expect that the driver's company would also provide some type of recognition

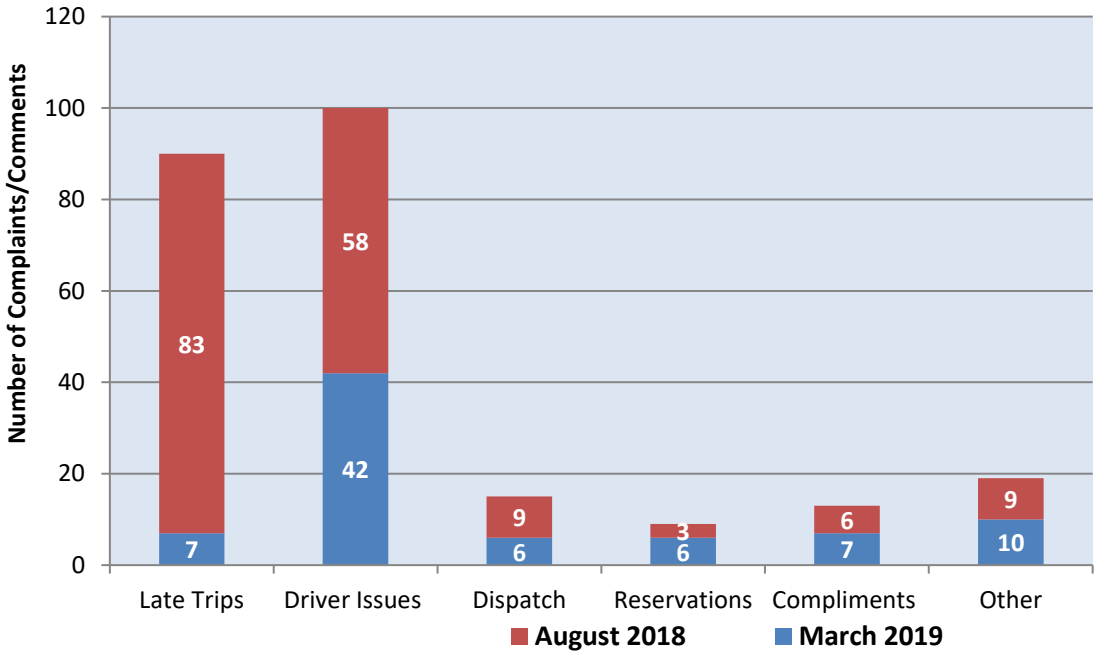
Rider Feedback

Formal Comments Documented by IndyGo

Open Door riders can provide formal feedback about the service by submitting a comment or complaint through IndyGo's several methods: online through the IndyGo website, by mail, or by telephone.

We reviewed two sample months of complaints and comments that were collected and documented by IndyGo: August 2018 and March 2019; see Figure 11.

Figure 11: Rider Complaints and Comments-August 2018 vs. March 2019



For August 2018, almost half (83 or 49%) of the 168 documented comments complained about late service, reflecting the performance issues experienced by the contactor during that

time. A third (58 or 34%) of the complaints focused on driver issues, other than late trips; these were predominately complaints about unsafe driving.

Complaints (and comments) decreased by more than half in March 2019 compared to August 2018. By that time, the contractor had improved performance, particularly trip timeliness. March 2019 saw only seven complaints about late service, less than 10% of the 78 total comments/complaints documented that month. However, March 2019 had 42 complaints related to drivers (other than late trips), comprising 54% of the comments/complaints that month. These driver complaints included unsafe driving, no-shows, and unspecified "criticisms."

Comments and Feedback Obtained through the Study

The paratransit study has been designed to obtain input about IndyGo's ADA paratransit service through several methods, including stakeholder interviews, a focus group, discussions with the Mobility Advisory Committee, an on-board rider survey, and several "rides-along" with a paratransit driver during the driver's shift.

While efforts continue to collect input, feedback received thus far related to paratransit performance can be summarized as:

- Strengths:
  - IndyGo has provided paratransit service throughout the county for many years
  - IndyGo seems receptive to the needs of people with disabilities
  - Paratransit staff are dedicated and receptive to questions
  - IndyGo strives to be cost-effective
  - On-time performance has improved (but is not consistent)
  - Provision of taxi vouchers is very positive; service is same-day
  - Open Door is affordable compared to private taxis

- Issues of concern:
  - Late trips are very late
  - Time-sensitive trips (e.g., medical appointments, work) are late arriving at destinations
  - Ride times are long
  - Routing is not logical
  - Communication about delays in service is lacking
  - Difficult to get information about late trips
  - ADA policies/procedures are many and confusing
  - Not in favor of new fare policy eliminating free fixed route fare for ADA certified riders
  - Not enough wheelchair accessible taxi service
  - Taxi drivers are not always helpful in assisting riders

POLICIES AND PROCEDURES

Policies and procedures for IndyGo's paratransit service are reviewed in relation to ADA requirements.

ADA's Six Service Criteria

The ADA regulations for complementary paratransit are highly prescriptive. IndyGo's adherence to the regulations for day-to-day service is discussed below according to the ADA's six service criteria.

1. **Operate in the same service area as the fixed route system, defined as a 3/4 -mile corridor on either side of bus routes and around rail stations.**

   IndyGo's service area exceeds the 3/4-mile corridors of its fixed route service by almost 50%.

2. **Have a comparable response time as fixed route, defined as accommodating trip requests for a particular day during normal business hours on the previous day (i.e., next-day service).**

   Open Door requires trips to be requested no more than three days in advance. This time period is considered a good practice as it tends to lead to fewer trip cancellations than a seven-day advance notice policy that is common in the industry (*1*). The original ADA regulations required a 14-day advance notice policy but this was revised with amendments in 1996 that allowed transit agencies to determine locally the advance reservation policy as long as it provided for reservations up to the day before desired service.

3. **Have comparable fares to fixed-route, defined as fares that are no more than twice the base, non-discounted adult fare for fixed route service.**

   The fare for Open Door at $3.50 is twice the non-discounted adult fare of $1.75 for fixed route service.

4. **Meet requests for any trip purpose, that is, there can be no trip purpose restrictions or priorities.**

   Open Door has no trip purpose restrictions or priorities.

5. **Operate during the same days and hours as the fixed route service.**

   Open Door service is provided during the same days and hours as fixed route service. The ADA regulations allow a transit agency to provide paratransit service that specifically mirrors fixed route. This means that if certain routes end at, for example, 10

p.m. but another route ends at 1 a.m., paratransit service in the corridors of the routes ending earlier would end at the same time, 10 p.m. in this example. But paratransit service in the corridors of the later ending route would need to be provided until the same ending time. It would be difficult for Open Door to mirror IndyGo's actual fixed routes because paratransit service operates in areas with no fixed route service.

To the extent that IndyGo's fixed route service will expand operating hours with new service planned for the fall of 2019, the operating hours for Open Door will also need to expand to match fixed route.

6. **Operate <u>without capacity constraints</u>, meaning no waiting lists, trip caps, or patterns and practices of a substantial number of trip denials, untimely pick-ups or excessively long trips**.

This criterion has been the more difficult one for transit agencies to meet, requiring virtually no denials of trips and high levels of performance for trip timeliness, trip length (measured by on-board travel time), as well as telephone availability for trip reservations.

<u>Waiting lists for service</u>:

There are no waiting lists for Open Door service. The lottery-based taxi voucher program is limited but, as a same-day service that is beyond that required by the ADA, it does not have to meet ADA regulations regarding capacity constraints.

<u>Trip denials</u>:

The ADA regulation for trip denials is one of the regulations whose definition has evolved since the ADA regulations were published. Operationalizing the definition is one of the complications of providing ADA paratransit.

As currently defined, a trip denial is any trip, which is requested for an eligible rider during the transit agency's operating hours and within the service area, that cannot be accommodated within the one-hour negotiation window allowed for ADA trips. This negotiation window allows the transit agency to offer a rider a trip within a time window one hour before to one hour after the requested time, as long as the offered time does not violate a time-sensitive trip (e.g., work, medical appointment). This window gives the transit agency some flexibility to create more effective shared ride trips. If a rider requests a pick-up at, say 10 a.m., the transit agency can offer at trip anytime between 9 a.m. and 11 a.m. If the rider declines a trip offer within those times, it is not a trip denial. Using the same example, if the transit agency cannot offer a trip within that time window and instead offers a trip at 11:30 a.m., regardless of whether the rider accepts that trip, it is to be counted as a denial.

If a rider is requesting a trip pick-up from work or school, for example, which has a time-certain end time, the transit agency's negotiating window does not include the hour before the end time. As an example, the rider asks for pick-up at 5 p.m. when the workday ends. The transit agency can offer a pick-up anytime between 5-6 p.m. Providing a time between 4-5 p.m. is not a valid option for the rider. If the only offered pick-up times are after 6 p.m., the trip is counted as a denial whether or not the rider accepts that trip.

For many time-sensitive trips, the focus is on arrival time at the destination end. If the rider requests a trip to arrive at 8:30 a.m., the transit agency can offer a trip scheduled to arrive between 7:30-8:30 a.m. Offering a trip that arrives from 8:30-9:30 a.m. is not a valid option in this case. It is important to note that for trip requests to arrive by a certain time, the rider cannot also request a pick-up time. The transit agency determines the appropriate pick-up time so that the rider arrives by the requested time at the destination. But to complicate ADA paratransit operations, the vehicle's timeliness is computed at both the pick-up and destination end.

We note that input received through study outreach suggested that riders are being offered trips outside of the ADA negotiating window. And as discussed earlier in the report, our observations in the call/control room saw instances where riders are offered trips beyond the allowed negotiation window. Even if accepted, these trips should be marked as denials.

The data reporting for Open Door, reviewed through April 2019, registers five or less denials each month. (The exception is the month of July 2018 with 49 denials reported, a number so different that it may be a mistake). It is recognized that paratransit programs may have an insubstantial number of denials in relation to total trips as long as the denials are not attributable to the design of the paratransit program.

Trip timeliness:

The regulations refer to “untimely pick-ups.” However, timeliness at the drop-off end is critical for time-sensitive trips. The FTA expects transit agencies to ensure timely drop offs for trips that are booked to an appointment time.

Current operational reporting for Open Door does not include any data showing on-time performance at the drop-off end. In addition to timeliness at the pick-up end, the contract speaks to OTP at the destination end, requiring that “95% of trip of the day’s trips must arrive at the destination by the agreed upon time (+5/-25).”

Given the input we received from stakeholders through interviews and the focus group regarding late arrivals for work trips and medical appointments, we looked at timeliness at the destination end for trips booked to an appointment as documented earlier in the report. The analysis found some concerns, in particular trips that

originate outside the ADA service area and travel to a destination inside. These trips are important for the riders; however, strictly from an ADA regulatory perspective, serving trips outside the ¾ mile corridors of fixed route is not required.

Following the submittal of this Tasks 2 and 3 Report in draft, we took a closer look at OTP in the months following the time period assessed for the study. With concerns about the contractor's performance in the summer months of 2019, we examined OTP from January 2019 through half of September 2019. We specifically assessed the degree of lateness for the trips outside the 30-minute on-time window. See Attachment A to this report. The assessment finds that between 1.5% and 4.3% of trips are more than 30 minutes after the 30-minute on-time window. This means that those riders waited more than one hour for their vehicle to arrive for the pick-up.

Trip length (on-board travel time):

The ADA regulations prohibit a pattern and practice of a substantial number of excessively long trips. But what is an excessively long trip? This is another example of evolving definitions of ADA regulations. In the early years of the ADA, transit agencies typically defined excessively long by a static number, for example, trips lasting more than 75 minutes or more than 150 minutes.

The FTA now recommends that excessively long should be determined on a case by case basis: paratransit trips that meet a certain threshold—that appear long in relation to the overall service—should be evaluated against the comparable fixed route trip. Accordingly, the FTA recommends that paratransit travel time should be compared to the same trip on fixed route, plus 20-30 minutes to allow for a reasonable estimate of time spent walking to and from a bus stop, waiting for the bus to arrive, and making any necessary transfers from one vehicle to another.

Long on-board travel time was an issue raised during our outreach efforts. Currently, Open Door paratransit trips identified as long are defined against a static measure: trips over 90 minutes and trips over 120 minutes. While such trips may in fact be too long, a more relevant determination would use what the FTA recommends, which is comparing each paratransit trip considered long against the comparable fixed route trip. Making such comparisons for each paratransit trip requires a unique calculation and is time-consuming if done manually. Trapeze has a module that does the calculations, easing the effort. For Open Door, computing unique calculations for trips considered long is complicated by the fact that there is no comparable fixed route for every paratransit trip, given the current paratransit service area.

Following the submittal of this Tasks 2 and 3 Report in draft, we also took a closer look at Open Door travel times. Using detailed trip reports from Trapeze that include riders' on-board travel times, we selected a small sample of trips within the ADA service area and small samples of trips with one or both ends outside the service area

to compare them to comparable fixed route trips. This is the analysis recommended by the FTA. While our samples are small, this analysis, included in Attachment A, suggests that about half of Open Door trips within the required ADA service area are shorter than comparable fixed routes trips; about 20% are 30 minutes or less longer, which would be considered reasonably comparable according to the FTA's suggested analysis; and about 30% are more than 30 minutes longer than comparable fixed route trips. Regarding Open Door trips with one or both ends outside the required ADA service area, our analysis shows that few of the Open Door trips have a comparable fixed route trip.

Telephone capacity:

Difficulty in accessing a paratransit service for trip reservations or for inquiring about a late trip can be a capacity constraint. The FTA typically measures hold times to assess telephone capacity—for calls to request trips and for calls to dispatch for "where's my ride." An FTA-sponsored report suggests that a good practice is the following standard: 95% of calls answered within three minutes and 99% in five minutes (*3*).

IndyGo's standard for Open Door measures the percent of calls answered out of all calls received rather than the response time. The list of performance measures specifies: If the percent of calls answered of total calls received is less than 93%, a penalty of $500 is applied; if the percent is greater than 96%, a $500 incentive is provided. The calculation uses all calls rather than differentiated calls for reservations and for dispatch. Data from the contractor's invoices show penalties applied for call answer rates for both measures each month from October 2018 through April 2019, which is the last month of our analysis period.

A good practice is to separate telephone lines used by riders from other lines needed for operations, for example, for administration and drivers.

Adoption of technology features enabled through smartphones would improve communications with riders and eliminate the need for some telephone calls. For example, calls to dispatch for "where's my ride" would be less necessary if riders could "see" their assigned vehicle on their phone along with the ETA (estimated time of arrival). This is a service enhancement that stakeholders strongly supported, according to input we received through the study.

Service Suspensions

The ADA allows transit agencies to suspend service for ADA paratransit riders for limited periods of time for certain violations of the rules and policies of the service, and specifically for no-shows and late cancellations of scheduled trips.

We note that IndyGo's suspension policies are the same as when the 2016 FTA Compliance Audit was conducted in early 2016 (*4*). The audit, initiated by the FTA, was intended to verify whether IndyGo is meeting its obligations under the ADA to provide paratransit as a complement to its fixed route service. As stated in the audit "no deficiencies were found with the requirements concerning the transit agency's no-show and late cancellation policies, the reasonableness of proposed suspension periods and the required process for appealing proposed suspensions of service, or with how the transit agency communicates these requirements to eligible riders and potential users of the service. "

The audit did comment on the fifth penalty—a penalty that is reviewed by IndyGo's Appeals Committee and decided on a case by case basis. According to the audit, the FTA considers suspensions longer than 30 days to generally be excessive.

ELIGIBILITY CERTIFICATION

Policies and Procedures

IndyGo's eligibility certification process for ADA paratransit applicants requires applicants to first complete a written application (*Personal Information Form*) and then obtain verification of the applicant's disability from a healthcare professional (*Medical/Professional Verification Form*). Applicants are informed that the healthcare professional can return the form to the applicant or send it directly to the assessment office.

The process also requires applicants to have an in-person assessment. Once the two forms are received at the assessment office, the office will contact the applicant to schedule an in-person interview to review the application and discuss the disability/health condition that affects the applicant's functional ability to use IndyGo's fixed route service.

IndyGo uses a contractor to administer the ADA certification process. The current contract is expiring at the end of August 2019; the transit agency is currently in the process of re-procuring a contractor.

IndyGo's policies appear generally effective, in particular the inclusion of in-person assessments. The current contractor is quite knowledgeable about the ADA and practices used in the transit industry. The contractor has attended training provided by the National Transit Institute (NTI) on ADA paratransit eligibility, which is a well-regarded training session. The two forms as well as the online information regarding the certification process are clear that the decision for eligibility is a transportation one, not a medical one. The information emphasizes that a qualifying disability should prevent use of accessible fixed route.

Inclusion of the in-person interview/assessment allows the contractor to meet the applicant individually, observe and assess the applicant's functional mobility and determine, along with

information from the applicant's healthcare professional, the extent to which the observed mobility prevents use of fixed route service. Research and experience have shown that inclusion of an in-person component for determining ADA paratransit eligibility has a winnowing effect, so that only individuals who are truly interested in applying do so; in effect, the requirement for the in-person component reduces the number of applicants by 20-30%.

IndyGo's policy on recertification includes a designation for individuals with a disability considered permanent and not likely to change. Those individuals are identified as "self-certify," and they do not need an in-person interview after the five-year eligibility period; instead, they update their information, typically via phone. Providing such a category eliminates the need for the rider to go through the complete certification process when the disability has not changed, and this is considered a good practice as well as cost-effective. Other re-certifying riders need to have the in-person interview when their five years are up and are categorized as "renewal" riders.

FTA Compliance Review

IndyGo's ADA paratransit service was reviewed by the FTA in 2016 to determine compliance with ADA's requirements for complementary paratransit (*4*). The only findings of deficiencies related to two aspects of the eligibility certification process.

The first deficiency found that the eligibility certification letters do not provide specific, transit-based reasons for decisions in determinations of ineligibility, or temporary or conditional eligibility. According to discussions with the current eligibility certification contractor, this deficiency was resolved and the letters now detail the reasons for determinations.

The second deficiency related to the appeal process for applicants who wish to appeal their eligibility determination. According to the FTA review, IndyGo's administrative appeals process did not explain the distinction, if any, between internal administrative reviews and an eligibility appeal, and does not always appear to maintain separation of function. The review also found that eligibility appeals decision letters did not contain specific reasons for the decision rendered. According to IndyGo staff, these issues have also been resolved.

Outcomes

IndyGo's reports on the eligibility certification process outcomes provide data on a variety of elements, such as the number of new applicants, number of renewing applicants as well as the number approved, denied and granted visitor eligibility each year. The data, however, do not disaggregate new applicants and renewing applicants.

Data reporting for certification outcomes should be more comprehensive. For example, the outcomes of the process should differentiate between new applicants and recertifying applicants. Most recertifying applicants are given the same type of certification as originally

given. It is the outcomes of the determinations for new applicants that should be particularly reviewed, as this is a measure to monitor for its potential effect on demand for ADA paratransit.

Monitoring should also include the denial rate. This rate is often a focus of a review of an ADA paratransit certification process, though it is a qualified measure of the effectiveness of the process: a high denial rate may actually show that the process does not provide adequate information about ADA paratransit, so that many people mistakenly think they are eligible before applying. Thus, a significant percent who apply are denied as their disabilities do not prevent use of fixed route transit.

On the other hand, a low denial rate may result from a comprehensive process that includes introductory material that thoroughly explains ADA paratransit and that also includes in-person component. Such a process helps self-select out potential applicants who are less likely to be eligible, resulting in somewhat fewer applications but that pool of applicants is more likely to be eligible.

The number of total eligible and registered riders should be monitored. However, our experience in the industry finds that the number of active riders on ADA paratransit (unique individuals who take trips) is a more relevant data point for measuring demand. This is because some individuals apply for and become certified for ADA paratransit as a back-up mode or a "just in case" option but do not use the service. Additionally, a count of registered ADA riders often includes individuals who have moved away, have become too disabled for ADA paratransit, or are deceased, thus the list does not represent actual use of the service.

To determine the number of active riders on Open Door, we reviewed the same three-month time period (January-March) for four years—2016 through 2019. We have defined an active rider as a unique individual who completed at least two trips during the time period. The data show that the number of active riders has fluctuated only slightly over the four years—from 1,727 active riders in 2016 to 1,709 in 2019, with only small variation in between.

Summary of Assessment

Based on a review of the published information on eligibility certification and IndyGo's reports on the process outcomes as well as discussions with the current contractor, a number of suggestions are made:

- Centralization of the tasks involved in certification into one office location suitable for in-person assessments and use of electronic files would facilitate procedural aspects of the function. The current process is somewhat disjointed: the contractor has staff in two different locations (one of which is the IndyGo administrative office), requiring the need to move paper files from the IndyGo location to the contractor's location. We note that the current RFP for the assessment contractor states that IndyGo is researching implementation of a paperless process.

- The applicant should be responsible for obtaining the healthcare professional form. The applicant has a vested interest in having the form completed and should be responsible for having his or her doctor or other healthcare professional fill out the form and then return it to the applicant.

- Information to applicants should make it clear that the applicant should bring to the interview the specific mobility device, if any, which is used when traveling out in the community. Some individuals use a different device inside their home than they use when out in the community.

- Currently, an applicant of any age can be certified for Open Door. Transit agencies that have a policy requiring children younger than a certain age to travel with an adult—on fixed route and paratransit—can apply the policy for eligibility determination. If, for example, the transit agency's policy states that children age 8 and younger must travel with an adult, then the eligibility determination process for children age 8 and younger will assume that the child will travel with an adult. That means that the process assesses the abilities of the child with the disability and the accompanying adult traveling together (the FTA refers to this as assessing the abilities of the "team"), rather than assessing the independent abilities of the child. A review of the age policies of a number of transit agencies found a range of the age threshold requiring accompaniment by an adult—from children under 5 to children under 12.

- According to the current contractor, certain organizations in the city such as the school district and Project Search provide fixed route travel training to their clients under the age of 21 as part of *life skills* instruction. The training sessions have taken advantage of the Open Door fare policy allowing free trips on fixed route. The new fare policy that will no longer provide this benefit will apparently be a hardship for the training programs. IndyGo might consider providing some type of student-in-training card with a defined termination date to such organizations that will continue to allow free use of fixed route to facilitate the training of the organizations' clients.

- The current process includes very limited use of the conditional eligibility category. Ridership statistics on fixed route show that a number of Open Door certified riders use fixed route. As documented in the Task 1 report, available data suggest that 2-3% of fixed route ridership is ADA-certified riders. These riders are, in effect, conditionally eligible—able to use fixed route some of the time or for some of their trips. Discussion with the current contractor finds that the assessment process can determine conditions under which applicants may be able to use fixed route service. These conditions can be identified when providing the applicant conditional eligibility. To clearly operationalize this category, a subsequent step would involve a field assessment to actually see the extent to which the pathways to and from the rider's origin and destinations are accessible for that particular rider. With this information, the process would then identify the specific trips that a conditionally eligible rider could take on fixed route. This information would be entered into the client's file in

the scheduling/dispatch software, so that the paratransit call-takers will know which trips the rider can take on fixed route (and therefore not eligible for Open Door). Riders with conditional eligibility could be granted free fixed route to encourage such use. The use of conditional eligibility is an important step in encouraging the use of accessible fixed route. Implementation of conditional eligibility will be facilitated with the new position for the Flexible and Contracted Services department that will be filled next calendar year.

- The opportunity for travel training is included in the current contractor's scope of service. IndyGo should ensure that the contractor has the resources to provide one-on-one travel training. Linking the certification process and travel training is a good practice, as the skills for travel training and assessing applicants' functional mobility for fixed route use are transferable. Travel training is a well-recognized strategy to encourage use of fixed route. It is also recognized as a cost-effective way to reduce ADA paratransit costs—the transit agency realizes cost savings for the paratransit trips diverted to fixed route. Input from stakeholders and paratransit riders suggested that travel training should be offered to all applicants for Open Door. These stakeholders said that people with disabilities can be insecure about using fixed route and education about how to use the service is important. Stakeholders noted that even though fixed route service is more flexible than Open Door, it can be intimidating.

- One final suggestion is that IndyGo might refer to the interview as a *transportation assessment* or *transportation interview* rather than an ADA paratransit assessment. This emphasizes the notion that the interview is an opportunity to educate the applicant about accessible fixed route, the opportunity for travel training for use of fixed route, as well as ADA paratransit. A *transportation assessment* can also emphasize an applicant's *abilities* rather than *disabilities*.

VEHICLE FLEET

IndyGo's 2017 RFP for Open Door listed 76 paratransit vehicles to be provided to the contractor for service, including body-on-chassis paratransit vehicles and several MV-1 vehicles.

Since the contractor began service in April 2018, IndyGo has retired a few vehicles (including the MV-1s) and provided additional vehicles for the contractor's use. Specifically, IndyGo provided 12 body-on-chassis vehicles and six accessible mini-vans in April 2019. The transit agency had originally planned to provide 15 new body-on-chassis vehicles. However, the contractor suggested that accessible mini-vans would be useful given the spread-out service area, so IndyGo was able to provide 18 vehicles instead of 15 for the same amount of funds. The contractor now reports that the mini-vans are not as useful as the larger vehicles. A significant disadvantage of the mini-vans is that they do not have MDTs for real-time

communications between the drivers and dispatch. The current fleet includes a total of 86 vehicles, including the mini-vans, plus two contingency vehicles.

A current maintenance issue with the fleet is "engine reduced power," affecting the 2015 vehicles and older diesel vehicles. The vehicles periodically cannot maintain the proper speed during service, requiring the driver to return to the contractor's facility and swap out the vehicle. This disrupts scheduling with negative impacts on OTP.

PEER ASSESSMENT

Comparison of Open Door to Selected Peers

Open Door's performance can be compared to the paratransit services of several other transit agencies. Six of the transit agencies included for the comparison were selected previously by IndyGo as appropriate peers, and we have included an additional agency that shares similarities with IndyGo. These transit agencies include:

- Ann Arbor Area Transportation Authority in Ann Arbor, MI (AAATA)
- Capital Area Transportation Authority in Lansing, MI (CATA)
- Greater Richmond Transit Company in Richmond, VA (GRTC)
- Interurban Transit Partnership in Grand Rapids, MI (The Rapid)
- Kansas City Area Transportation Authority in Kansas City, KS (KCATA)
- Mass Transit Department in El Paso, TX (Sun Metro)
- Transit Authority of River City in Louisville, KY (TARC)

Comparing paratransit performance across transit agencies is a standard task for a paratransit study, typically using data from the FTA's National Transit Database (NTD), and can provide insights into areas where IndyGo might be above or below the performance of similar transit agencies.

We note that such comparisons are useful in a general sense but should be viewed with caution for several reasons: transit agencies' data collection and reporting practices for NTD vary, particularly for reporting total operating costs, so that comparisons do not always use comparable data items; the NTD definition for Demand Response ("DR") includes more than ADA paratransit so that transit agencies serving seniors, for example, with their ADA service will have a greater demand density that then impacts metrics using passenger trips; and transit agencies' service area size and environment impact the provision of paratransit service which are not necessarily reflected in the reported data.

Table 4 presents the key operating data and performance measures for the seven comparison agencies and for IndyGo using data from the NTD Report Year 2017, which is the most current data available at the time of this analysis. The performance measures are discussed following Table 4.

Table 4: Key Operating Data and Performance Measures Comparison

		Service Area Statistics			NTD Demand Response Data (FY 2017)					Performance Measures					
Tranist Agency	Location	Square Miles	Population	Population Density	DR Vehicles Operated in Maximum Service	DR Passenger Trips	DR Operating Expense	DR Revenue Hours	Passenger Miles	DR Passenger Trips per Capita	DR Passeger Trips/ Revenue Hour	DR Operating Cost/ Passenger Trip	DR Operating Cost/ Revenue Hour	Average DR Trip Length	Comments
AAATA	Ann Arbor MI	110	224,916	2045	65	241,121	$7,466,932	151,001	1,718,993	1.1	1.6	$30.97	$49.45	7.1	PT. Service provided outside ADA area; same-day service provided. Eligible riders include seniors.
CATA	Lansing MI	136	289,629	2130	92	501,308	$13,982,511	189,402	3,503,239	1.7	2.6	$27.89	$73.82	7.0	Service is both DO (29 veh) and PT (63 veh). Service provided outside ADA area; also provides a number of other DR services for general public and in neighboring townships.
GRTC	Richmond VA	227	449,572	1980	62	361,787	$6,658,813	156,259	3,128,411	0.8	2.3	$18.41	$42.61	8.6	PT. Started pilot with TNCs in August 2017, providing same-day trips.
KCATA	Kansas City MO	456	788,748	1730	70	325,068	$13,560,994	166,118	2,229,818	0.4	2.0	$41.72	$81.63	6.9	DO (10 vehs) and PT (60 vehs); and taxi. ADA and "Non ADA: service. Service includes "On-Demand" option for people with disabilities, with up to 60 one-way trips/rider/month.
					36 taxis	63,249	$1,459,089	20,212	474,625	0.5 with taxis	3.1	$23.07	$72.19	7.5	
Sun Metro	El Paso TX	250	747,495	2990	62	318,849	$9,522,398	153,489	3,038,083	0.4	2.1	$29.86	$62.04	9.5	PT.
The Rapid	Grand Rapids MI	155	417,978	2697	74	355,255	$7,625,447	146,698	4,724,517	0.8	2.4	$21.46	$51.98	13.3	PT. Seniors eligible for service. Starting an on-demand pilot.
Transit Authority of River City	Louisville KY	357	806,893	2260	91	390,352	$11,321,001	224,260	3,596,687	0.5	1.7	$29.00	$50.48	9.2	DO (1 veh); PT (90 veh). Service only within ADA area. Taxis used in regular pre-scheduled and shared ride ADA service and also used for will-call trips.
					50 taxis	196,058	$5,250,060	118,529	1,809,586	0.7 with taxis	1.7	$26.78	$44.29	9.2	
IndyGo	Indianapolis IN	396	928,281	2344	71	309,242	$10,370,485	184,842	3,806,596	0.3	1.7	$33.54	$56.10	12.3	PT. Provides service outside ADA area. Taxi vouchers available.

Source: NTD 2017

Legend:

DR - Demand response service, typically provided on advance reservation, shared-ride basis.

DO - Service is directly operated by the transit agency.

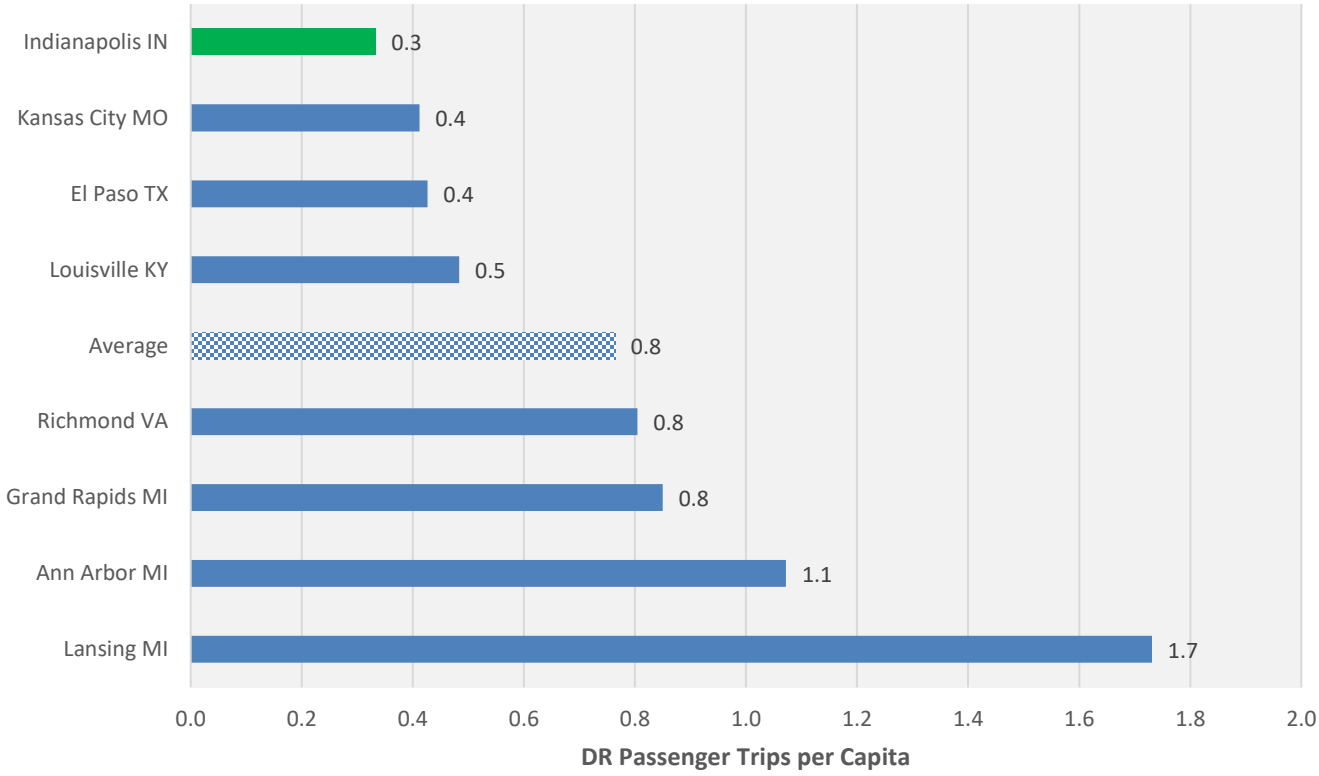
PT - Service is operated by a contractor ("Purchased Transportation")

Passenger Trips per Capita (Figure 12)

Passenger trips per capita is a measure of both paratransit supply and utilization, indicating the availability of service and level of use in a community. As mentioned above, it is important to note that "DR" services for NTD purposes include not just ADA paratransit but other demand response services that a transit agency provides, such as service for seniors or other specialized user groups. Transit agencies that provide more than next-day ADA paratransit service will have a higher number on this measure.

Lansing, Michigan has the highest number of passenger trips per capita and IndyGo the lowest. Lansing's transit agency, CATA, provides a wide range of services that fall in the demand response category, including service for seniors and a number of flex route services operated by the paratransit contractor, thus contributing to the agency's high score on this measure. Several of the other peer transit agencies also provide service beyond ADA paratransit, thus contributing to their result on this measure.

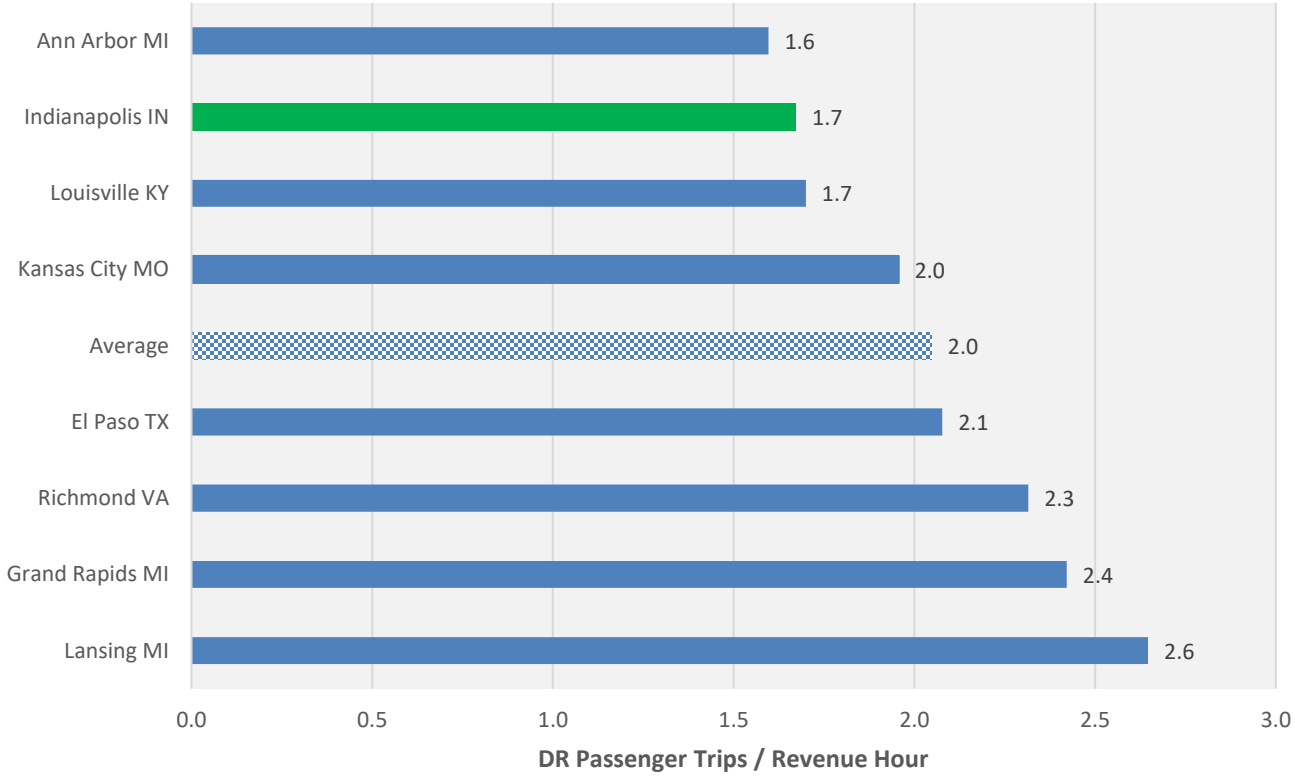
Figure 12: Peer Agency Data—DR Passenger Trips/Capita



Passenger Trips per Revenue Hour (Figure 13)

Passenger trips per revenue hour measures paratransit productivity, a key measure of effectiveness. Lansing, Michigan's service again has the highest number and Ann Arbor, Michigan's service the lowest. Lansing's CATA service benefits from its relatively high demand density, given the wide range of eligible users and relatively smaller service area. Ann Arbor's lower productivity results, in part, from use of a scheduling/dispatch system typical in the taxi industry that is not designed for shared riding. IndyGo is at a disadvantage on this measure in that it is a countywide service with longer trips (as shown in Figure 16).

Figure 13: Peer Agency Data—DR Passeger Trips/Revenue Hour

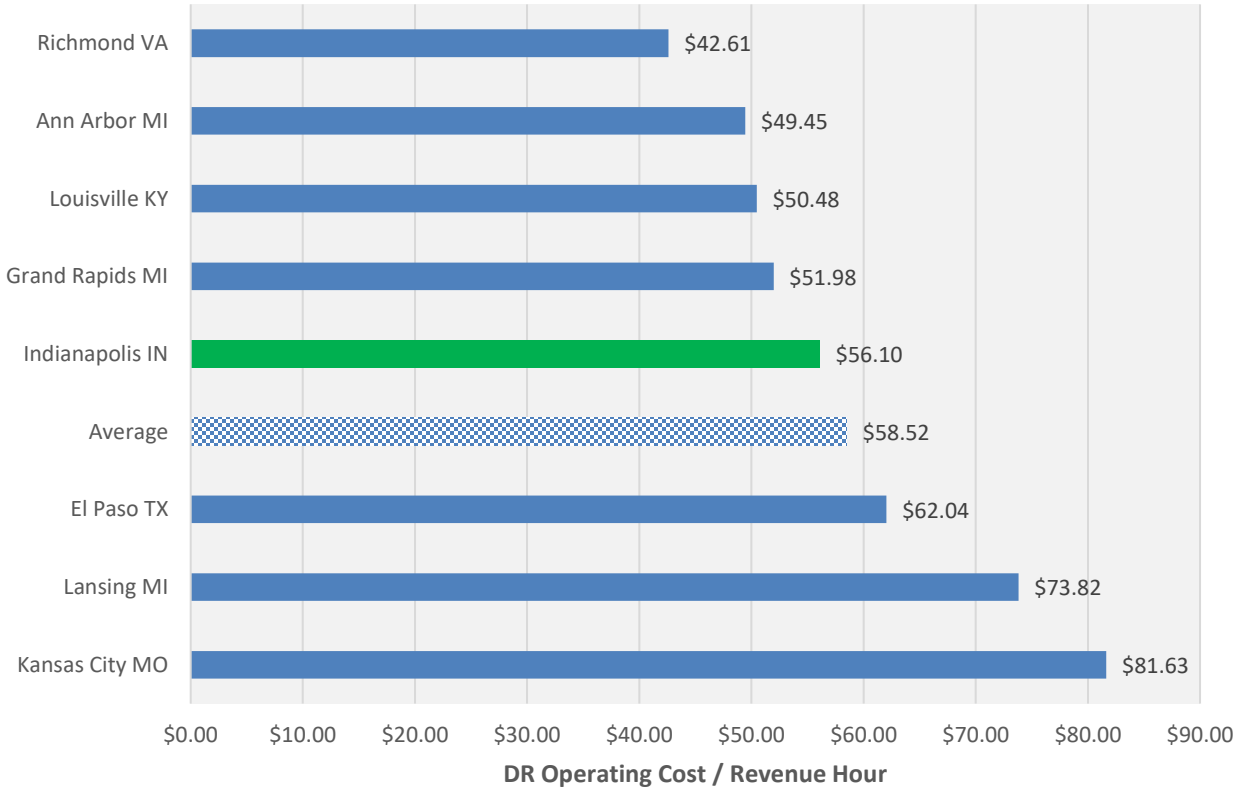


Operating Cost per Revenue Hour (Figure 14)

Comparisons of transit agencies on this measure are dependent on how the transit agency reports its total operating costs in NTD for the DR mode. This is particularly true when a private contractor is involved. NTD data on operating costs, for example, are not to include costs for contractor-provided vehicles or for costs to lease a facility. But separating out such costs is generally difficult. Moreover, when the transit agency has a more expansive paratransit service than ADA with the DR mode, its operating costs will tend to be higher. The NTD data for this measure find that IndyGo's cost is less than the average of $58.52 per revenue hour. Kansas City's DR service has the highest cost, which may reflect its expansive services under its DR mode; the service area is large, covering Kansas City, Kansas and Kansas City, Missouri as well as parts of adjacent counties, and ADA and non-ADA service is provided.

We note that the 2017 NTD data report a higher cost per revenue hour for Open Door than what is calculated by annualizing 2017 cost data from monthly contractor invoices. The study used the latter cost figures to review Open Door's performance earlier in the report. It may be that administrative costs were added to the contractor's costs for reporting paratransit data for NTD purposes. Whatever the reason, the difference underlines the point that peer comparisons using NTD data are only somewhat useful as data reporting practices can vary.

Figure 14: Peer Agency Data—DR Operating Cost/Revenue Hour

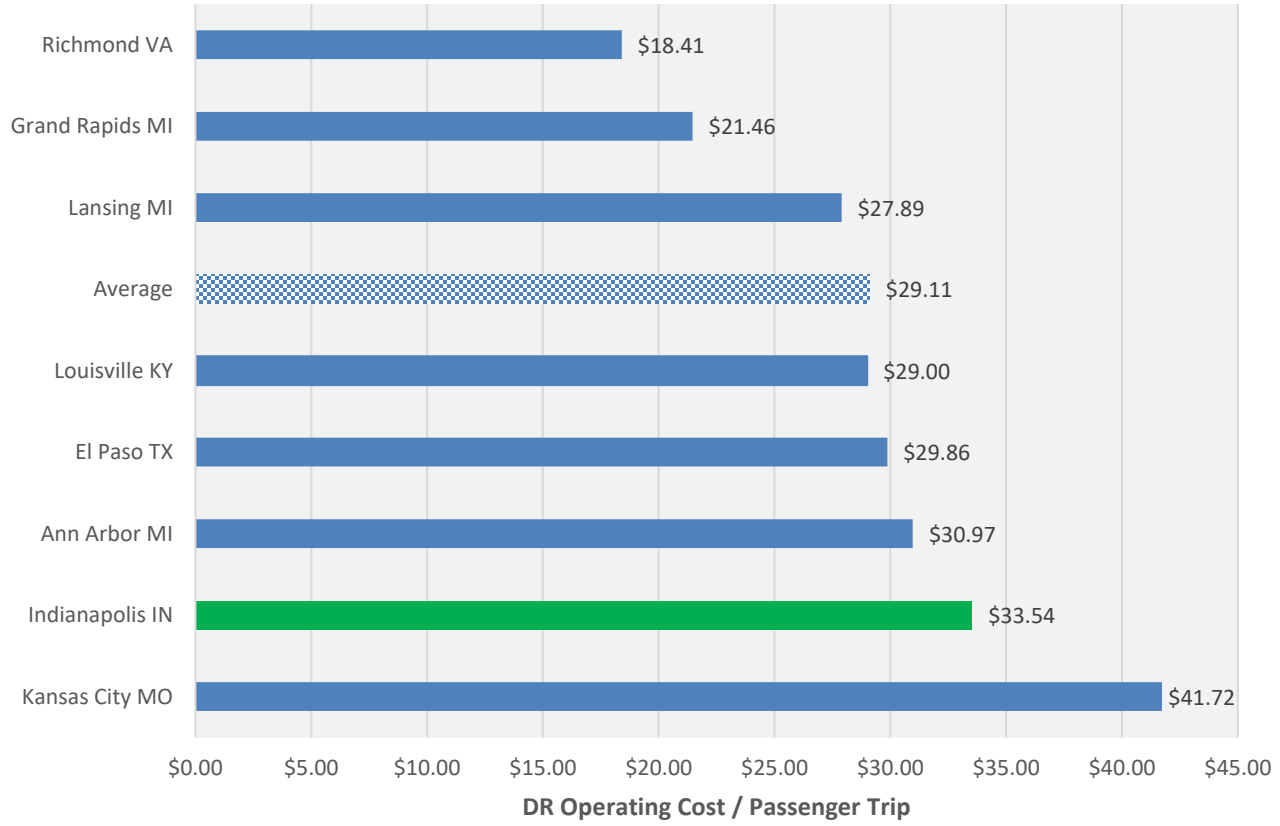


Operating Cost per Passenger Trip (Figure 15)

Comparisons across the transit agencies on the measure *operating cost per passenger trip* should keep in mind the caveats about the data element operating cost noted above as well as the notation regarding IndyGo's cost data on the previous figure.

The key to performance on this measure is the transit agency's productivity. A higher productivity will reduce the operating cost per passenger trip. Those agencies with a higher cost per passenger trip tend to be those with a lower productivity.

Figure 15: Peer Agency Data—DR Operating Cost/Passenger Trip

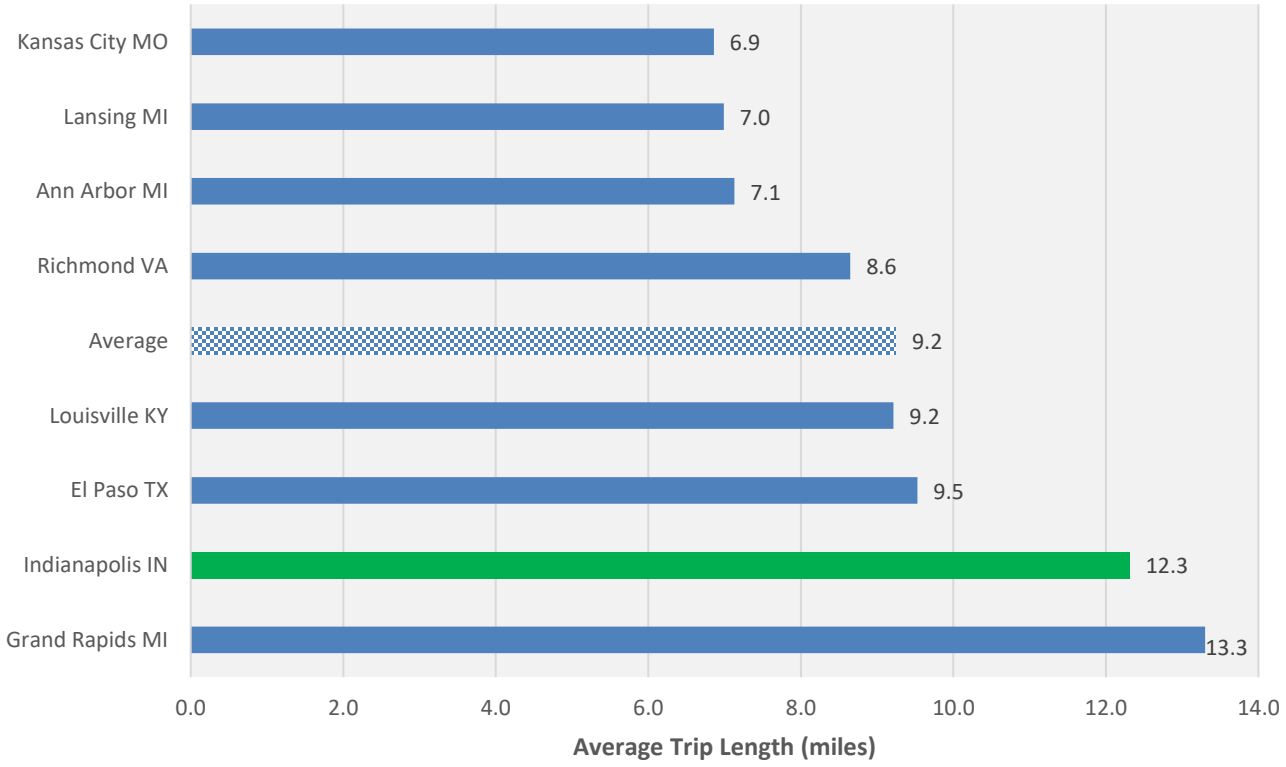


Passenger Trip Length (Figure 16)

Passenger trip length is computed using NTD reported passenger miles and total passenger trips. It is a composite measure reflecting the paratransit's service area size, distribution of riders' origins and destinations, and degree of shared riding. The measure has an important effect on the paratransit program's productivity, with longer trip lengths having a negative effect on productivity. The average trip length should be monitored over time, as changes may be reflected in system productivity.

IndyGo is on the higher end of average trip length at 12.3 miles. This reflects the size of the service area—encompassing all of Marion County as well as small portions of neighboring counties.

Figure 16: Peer Agency Data—Average Trip Length



Summary

Based on the 2017 NTD data, Open Door's performance on cost per revenue hour compares favorably with the selected peer transit agencies' paratransit services. For the important measure of productivity, Open Door at 1.7 passenger trips per revenue hour is less than the 2.0 average of the peers, resulting in part from the large service area and average trip length, which at 12.3 miles, is the second highest. Open Door's productivity impacts its cost per passenger trip, which is on the higher end of the other agencies even though the cost per revenue hour is less than the average.

A number of the peers provide service beyond the ADA requirements. Two of the Michigan agencies include seniors as eligible for ADA paratransit. The Kansas City, Missouri transit agency (KCATA) provides a number of services. It refers to its service as "complementary paratransit that provides ADA and non-ADA paratransit throughout the Kansas City region." The service area is large, covering 456 square miles that straddles two states and serves four different jurisdictions. Eligibility policies vary by the four jurisdictions; in some cases, seniors are eligible and, in another, only low-income seniors. Its cost per revenue hour and cost per passenger trip are the highest among the selected agencies.

Additionally, two of the peers (Kansas City, Missouri and Richmond, Virginia) have recently implemented same-day services for their eligible riders, which will tend to shift some trips from ADA paratransit to the same-day option.

Peer comparisons are standard for a paratransit study but it is more important for IndyGo to monitor its own performance year over year.

TRENDS AFFECTING DEMAND AND COSTS FOR ADA PARATRANSIT SERVICE

Demographic Trends – Increasing Senior Population

The county's senior population is projected to grow in number and in relative proportion to the total population, as shown in Table 5. Within one year, 2015 projections estimate that 13% of the county's residents will be age 65 and older. Within ten years, that proportion will grow to more than 16%. While seniors are not considered eligible for ADA paratransit solely because of their age, the incidence of disability increases significantly with age.

The growing senior population will contribute the most significant potential demand for ADA paratransit. Applying the national disability rate for the 65 and older age cohort to Marion County's population projections suggests the following: there may be 44,200 seniors with disabilities in 2020; 57,040 seniors with disabilities in 2030; and 59,290 seniors with disabilities by 2040.

Table 5: Population Data and Projections for Marion County, 2010 – 2040

Year	Population/ Projection	Percent Growth	Population Age 65+	Percent Age 65+
2010	903,393	--	96,102	10.6%
2020	963,732	7%	125,489	13.0%
2030	1,001,231	4%	162,045	16.2%
2040	1,033,719	3%	168,434	16.3%

Source: STATS Indiana: Indiana's Public Data Utility at http://www.stats.indiana.edu

These estimates do not translate to numbers of residents who will have a mobility disability preventing use of accessible fixed route and who might seek specialized public transportation from IndyGo. Rather, the estimates point to the growing population and increasing numbers of seniors that will have an impact on the demand for ADA paratransit in Marion County.

Trip Shifting from Other Specialized Transportation Programs

Experience in other urban areas shows that some human service agencies are shifting trips for their clients with disabilities to the ADA paratransit service provided by their community's transit agency. With increasing costs for human service agencies to provide their own transportation and the knowledge that ADA paratransit cannot limit trips for eligible riders (i.e., ADA's prohibition of trip denials), some human service agencies transfer the responsibility of their clients' transportation to their local transit agency.

IndyGo's role as the administrator of the Section 5310 program gives it some leverage to address the trend. Through this role, IndyGo can ensure that human service agencies awarded vehicles through the federal grant program coordinate with IndyGo's paratransit service and share responsibility for transportation for people with disabilities.

Another approach to coordinating with human service agencies is the ADA allowance whereby a transit agency can charge higher fares or a negotiated rate for service that is prearranged by the human service agency and guaranteed for its clients. This does not include, however, ADA riders who book travel to and from their human service agency.

Indiana's use of private brokers for Medicaid transportation is another area where trip shifting to ADA paratransit may be happening. A broker profits from this shifting as it does not have to pay for those trips that would otherwise be served by providers in the broker's network of providers (e.g., local medi-van providers and taxi companies). The Medicaid broker may be paying the fare for the Medicaid beneficiary's trip on ADA paratransit, but that is a small portion of the cost to provide a paratransit trip. The transit agency is then left with the cost for most of the trip that otherwise would be paid for through the Medicaid program, which, as a shared federal-state program, receives at least 50% funding from the federal government's Medicaid program. The broker profits from placing trips on public transit.

Improving Community Integration for People with Developmental Disabilities

Human service agencies serving clients with developmental disabilities are striving to better integrate their clients into the community, with impacts on transit agencies' ADA paratransit services. This trend follows the Olmstead v. L.C. Supreme Court decision in 1999 and subsequent legislation, including the Developmental Disabilities Assistance and Bill of Rights Act of 2000 and a Department of Health and Human Services 2015 ruling to strengthen the 2000 Act. Agencies serving people with developmental disabilities are under pressure to ensure their clients are better integrated and included in the community.

Better integration includes opportunities for employment in the community. The result is less focus on transporting people with developmental disabilities to one centralized location for supported work or day programs but rather to various dispersed activities and employment sites in the community. For transit agencies' ADA paratransit services, this means an increase in the number of trips needed and changing trip patterns. There will be fewer group trips to one location ("many-to-one" trips) and more individualized trips to various different locations ("few-to-one" and "one-to-one" trips). The increase in trips and more limited opportunities for group trips with shared riding will increase demand and costs for ADA paratransit.

EMERGING PRACTICES FOR ADA PARATRANSIT

Concerns in the transit industry about rising demand and costs for ADA paratransit began by the early 2000s. Transit agencies addressed these concerns with different strategies, including a reduction of their paratransit services to the minimum required by the ADA, introduction of same-day taxi programs to divert more expensive ADA trips to less expensive taxi trips, and, more recently, the use of TNCs for same-day service.

Rising ADA paratransit demand is not currently a major issue of concern for IndyGo, but cost for paratransit is an issue, and there are ongoing concerns related to operational performance. Reducing the service area to the minimum required by the ADA would provide some cost-savings compared to the current countywide service area and would also benefit performance. With trips contained within the 3/4-mile corridors of fixed routes, Open Door would no longer serve trips to and from the farther ends of the county—trips sometimes requiring long travel times. Eliminating such trips would also provide new capacity to improve performance in the required ADA area.

The various strategies that have been used in the transit industry to address issues with ADA paratransit are discussed below.

Reduce Service Area to ADA Requirements

After the ADA was passed, some transit agencies implemented ADA service in an area larger than required. The reasons varied: some agencies believed it would be more difficult operationally to provide service only in the 3/4 mile corridors of fixed route; others receiving funding from a jurisdiction did not think it fair to restrict service to only part of the jurisdiction; and others already had some type of specialized service and overlaid that with ADA service. One of the reasons cited during our study's interviews for IndyGo's larger-than-required service area was the fact that much of the community lacked sidewalks that, otherwise, would allow more residents access to fixed route service.

Research in 2008 documented two transit agencies' experience in reducing their service area (*1*). The first, the Orange County (CA) Transportation Authority (OCTA), determined that 2% of total daily ADA paratransit trips would be affected with a reduction in the service area to that required by the ADA, affecting about 315 eligible riders (1.2% of approximately 26,000 registered riders). Many of these individuals were provided individualized assistance in finding other transportation options. Additionally, the transit agency implemented a new same-day taxi program for its ADA riders, and one of the objectives of this new program was to mitigate possible negative impacts of the service area reduction. This was one of a number of strategies implemented that resulted in productivity improvement and a slowing of the rate of growth in OCTA's ADA passenger trips and revenue hours needed for the service.

The second system, the Regional Transit District (RTD) in Denver, analyzed potential effects of reducing its service area, identifying 114 riders that would be affected (0.9% of the 12,500 eligible riders). RTD had a same-day taxi program in place that was available to help meet the needs of riders affected. With the tightening of the service area, the transit agency estimated that its scheduled productivity increased from 1.3–1.5 passenger trips per revenue hour, with about 2% trip denials, to 1.45–1.52 scheduled productivity and no trip denials.

Reducing the service area to the ADA minimum can also be approached by allowing eligible riders outside the ADA service area to continue using the service—essentially grandfathering in those individuals. This was the approach taken by the Washington Metropolitan Area Transit Agency (WMATA) serving the Washington, D.C. region. The transit agency determined that about 3% of its certified and active riders lived outside the ADA service area, and it allowed these riders to continue using the service until they either moved or passed away.

The Regional Transportation Commission (RTC) in Las Vegas is another example of a transit agency using the grandfathering strategy. The transit agency had served 1.5-mile corridors on each side of fixed routes but, with increasing costs to provide ADA paratransit, reduced the service area to the required 3/4-mile corridors in 2011. Riders who lived in the area no longer served were allowed to continue using paratransit as long as they did not move from the residence of their original eligibility.

More recently, with pressure from the community and a healthier economy, RTC conducted a comprehensive study in 2018 to determine if it should return ADA service to the larger area (5). The study analyzed 50 of RTC's peer paratransit services to see if they exceeded the required ADA service area and, if so, the funding that was used. The study included a survey, which 41 transit agencies answered. According to the survey response, 23 (56%) of the agencies serve only the required ADA area while 18 (44%) serve an extended area. The study found that those agencies serving an extended area have a denser service area and higher average population than agencies serving only the required area. The study also found that agencies serving the larger-than-required area have lower productivities. The study recommended that RTC not revert to the earlier larger-than-required service area if it wanted parity with its peers in the industry.

It appears the RTC followed the study's recommendation. However as an alternative, it has implemented a pilot service for ADA riders using a TNC (in this case Lyft) that allows riders to take subsidized same-day trips.

One of IndyGo-selected peer agencies—CATA in Lansing, Michigan—has recently analyzed the impacts of reducing the service area for ADA riders to the ADA requirements. While CATA's situation is complicated by the fact that the agency provides several flex and other demand response services bringing ADA certified riders into the ADA service area, the agency is contemplating applying a grandfather service area for current riders and a more restrictive

area for newly certified ADA individuals. The net impact of the proposed changes on current ADA riders is expected to be minimal.

Introduce Same-Day Taxi Program

Same-day taxi service is another strategy to address increasing cost and demand for ADA paratransit. The objective of such programs is to divert the more expensive ADA trips to less expensive taxi trips.

A number of transit agencies have agreements with local taxi companies to provide trips for ADA eligible riders that are subsidized by the agency. The structure of the programs varies: some allow a set number of subsidized trips per day, others provide a monthly subsidy that the riders use as they see fit. Early same-day taxi programs used scrip or paper vouchers but increasingly the programs use technology with a swipe or debit card.

A typical program will require a fare at the outset of the trip, for example, $5.00, then a set amount of the meter fare is subsidized, for example, $15. If the meter cost for the trip exceeds the sum of the fare and the subsidy, in this example $20, the rider is responsible for the excess.

The benefit to the transit agency is that it pays no more than $15 for the trip, in the example, and the advantage to the rider is a same-day trip. But because same-day service increases trip demand, it is important to set limits on trips.

The programs can also be designed so that ADA eligible riders receive a predetermined amount of subsidy per month. For example, riders may pay $25 for $75 worth of taxi transportation. Riders determine how best to use the allotment—few longer trips or more shorter trips.

It's important to recognize that no study has yet determined the degree to which same-day programs save costs for ADA paratransit. Transit agencies with these programs claim cost savings. Actual savings will depend on the structure of the program (e.g., what is the cost to the rider, how many trips can be taken with the subsidy) and the willingness and capacity of the community's taxi industry to participate as well as the taxi industry's performance.

With the advent of TNCs, transit agencies are looking at these new companies to offer a same-day option for ADA riders. TNCs, however, do not typically have accessible vehicles and users generally need a smartphone as well as a credit or debit card. In order to meet ADA as well as Title VI requirements, [9] the transit agency must provide a supplemental service that

[9]Title VI of Civil Rights Act of 1964 prohibits discrimination on the basis of race, color, or national origin in programs and activities receiving federal subsidies. Augmenting Title VI, Executive Order 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations extends federal protection to low-income populations. Federally-funded public transportation providers are mandated to

meets the federal requirements. Typically, agencies turn to a local taxi company with accessible vehicles.

Pilot the Use of TNCs for ADA Riders

An increasing number of transit agencies are experimenting with the use of TNCs to supplement service for their ADA riders. These programs have the same objective as same-day taxi programs, that is, to offer a less costly alternative to next-day ADA service. The programs share design features with the same-day taxi programs, providing a limited number of daily subsidized trips or a monthly subsidy.

Typically the TNC services are implemented as pilots, which allow the transit agencies several options. The transit agency can terminate the pilot if not successful, since there is no expectation that it is a permanent offering; it can revise the pilot based on the early experience; and, if successful, the agency can convert it to an ongoing service. In some cases, the pilot service is rolled out for a small number of selected riders. In other cases, the pilot is available to all ADA riders.

Research finds that transit agencies are generally pleased with their TNC pilots and claim trip diversion from ADA paratransit. However, there is a lack of hard data for evaluation purposes to assess cost-savings (*6*).

The study's stakeholder interviews and meetings found considerable support for possible use of TNCs to support ADA paratransit, though some concerns were expressed. The latter included the lack of wheelchair accessible TNC vehicles; the need for riders to have a smartphone (e.g., some people do not have one); the lack of specialized training for transporting people with disabilities; and liability issues.

Several examples of TNC pilots are described below.

Greater Richmond Transit Company (GRTC), Richmond, Virginia

GRTC was interested in a cost-effective approach to help meet increasing demand for ADA paratransit. The agency also wanted to give its ADA riders a mobility option beyond next-day service. The agency planned a same-day pilot service that included a call center, allowing riders without a smartphone to request trips, and accessible vehicles.

The transit agency explored an agreement with the dominant TNCs but they did not seem interested in providing a call center. Instead, GRTC negotiated agreements in 2017 with two hybrid TNCs. The first, UZURV, provides a call center as well as a mobile app. As a hybrid, the company has characteristics of a "traditional" TNC but also meets certain ADA requirements.

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consider these population groups and the limited English proficiency (LEP) community when developing or redesigning transit service, and demonstrate equitable access to these groups.

For example, the drivers receive sensitivity training and provide door-to-door service when needed by riders. The second company, RoundTrip, is a web-based reservation service. Both companies have agreements with a network of transportation providers, including those with accessible vehicles. ADA riders pay the first $6 for each trip, with GRTC paying up to an additional $15. If the trip costs more than $21, the rider pays the excess. The companies charge for trips based on mileage and the cost to the rider is also subject to an additional charge for peak time-of-day demand (i.e., surge pricing).

One interesting feature of GRTC's pilot is that riders are to request trips at least two hours in advance. Trips can also be booked up to 30 or more days in advance. Riders can request favorite drivers, at least with UZURV. The two-hour advance notice facilitates more equitable service between ambulatory riders and those who need an accessible vehicle. There are more sedans than accessible vehicles available, which means it is more difficult for the accessible vehicles to respond to a trip request as quickly as a sedan. The two-hour advance notice gives more time for an accessible vehicle to respond.

The ADA requires that these transportation services be *equivalent* for ambulatory riders and riders who use a wheelchair and require an accessible vehicle. The equivalency requirements, which are different than ADA paratransit requirements, essentially mean that whatever level of service is provided to people without disabilities should be provided to those with disabilities.[10] GRTC's two-hour advance notice policy helps to ensure that response times are similar for ambulatory riders and those who need an accessible vehicle.

GRTC is pleased with the pilot: it is diverting trips from ADA paratransit. GRTC pays no more than $15 per trip with the pilot, while an ADA paratransit trip costs about $30.

Omnitrans, San Bernardino, California

Omnitrans, serving San Bernardino County in Southern California, provides a same-day service for its ADA riders and seniors age 62 and older using Lyft as well as a local taxi company. The taxi service is included to ensure the program meets ADA and Title VI requirements: the taxi company has a call center, riders can pay with cash, and the taxi company has accessible vehicles. The pilot, known as RIDE Taxi & Lyft, was implemented so that riders have a same-day trip option and to help address ADA paratransit costs.

To participate in the program, an eligible rider first completes an application that includes signing a "hold harmless" form where the applicant agrees that *"being driven by others is an inherently dangerous activity…and I agree to indemnify and hold harmless Omnitrans, its officers…from any and all claims, losses and liabilities…arising out of or in any way connected with my participation in the* [specialized transportation service] *programs."*

[10] Equivalent service means that people with disabilities, including wheelchair users, are provided with the same level of service as those without disabilities as measured by the following seven criteria: response time; fares; geographic area of service; hours and days of service; restrictions or priorities based on trip purpose; availability of information and reservations capability; and any constraints on capacity or service availability.

While the Richmond, Virginia pilot subsidizes individual trips, Omnitrans provides a monthly subsidy. To use Lyft, an eligible individual purchases a code for $40 that gives $80 worth of Lyft transportation. The individual inputs the code into their personal Lyft account. Each month, the individual can purchase the same amount of Lyft service for $40 by calling the transit agency. The code is valid only for the calendar quarter when it is purchased.

To use the taxi service, an eligible new individual can buy $80 worth of taxi transportation loaded onto a debit card for $40. The card, which has a photo of the individual, is issued by the transit agency. Each month thereafter, the individual can "reload" the card for $80 worth of taxi service for $40 by contacting the transit agency with payment. For both Lyft and taxi, eligible users can obtain the subsidy only once per month.

Omnitrans has reported that it is pleased with the program, which gives riders another mobility option beyond paratransit and, reportedly, diverts more costly ADA trips to less expensive Lyft and taxi trips.

The Rapid, Grand Rapids, Michigan

Grand Rapid, Michigan's transit agency, The Rapid, has partnered with VIA to create an on-demand shared ride-hailing program with wheelchair accessible vehicles called "Rapid On Demand." VIA is a TNC that also licenses its software to cities to help them build their own on-demand shared transit program. According to the VIA website, its smart algorithm enables multiple riders to seamlessly share a single paratransit vehicle through curbside pick-ups for quick and efficient travel.

The Rapid's six-month pilot program is available for individuals who are eligible for GO!Bus, the transit agency's ADA paratransit service that also provides service to non-disabled seniors. Riders of Rapid On Demand can use a credit card, cash, or paper tickets as payment for the service.

Riders need to download the Rapid On Demand app and make sure to set the accessibility preferences to wheelchair or a walker-friendly seat. Once the preferences are set, all requested rides will be provided by wheelchair or walker-friendly vehicles. The service area is located in the Grand Rapids and Kentwood areas and is available Monday to Friday from 8 a.m. to 5 p.m. Once a user requests a ride, they will be directed to a nearby virtual bus stop that includes a short walk for both pick-up and drop-off. This service allows riders to schedule transportation through the app with 15-minute or less wait times along with curb-to-curb service.

The Rapid received grant funding from the state through the Michigan Mobility Challenge, a grant initiative seeded with an $8 million legislative appropriation in 2018 to use technology and innovation to address core mobility gaps for seniors, persons with disabilities, and veterans across Michigan. The transit agency reports using $373,782 from its share of the state grant for the pilot program.

OVERVIEW OF PRELIMINARY CONSIDERATIONS AND RECOMMENDATIONS

Preliminary considerations and options for improvement are outlined within the three categories requested for the study: (A) short term options that could be implemented relatively quickly and without major fiscal impact; (B) preliminary identification of options that require further consideration and analysis; and (C) improvements related to contractual considerations.

A. Short Term

	Option	Impact on Riders	Fiscal Impact	Implementation	Comments
	ADA Paratransit and Its Relationship Within IndyGo				
1	**Improve reports and information provided to IndyGo Board**: • Provide complete and timely ADA paratransit reports, clarifying performance framework • Provide adequate background information on rationale for ADA paratransit plans and changes • Encourage board members to gain more perspective on paratransit (e.g., attend MAC meeting, take a trip on Open Door)	Potentially positive	None	• Staff action • Board member willingness	Interviews with board members suggested preference for more and timelier reports; revealed lack of background information on certain paratransit issues and plans.
2	**Elevate website information on accessibility:** • Provide more prominent online information on accessible transit options—both fixed route and ADA paratransit	Positive	None	• Staff action	IndyGo's main webpage header does not have a link for "Accessible Services."
3	**Involve Mobility Advisory Committee (MAC):** • Involve MAC early in planning efforts for fixed route as well as paratransit • Continue to include MAC representation in procurements involved paratransit • Continue to ensure inclusion of MAC verbal reports at Board meetings and MAC meeting minutes in Board reports	Positive	None	• Staff action	Input from MAC members suggested the committee does not always learn of transit agency plans for fixed route early in planning process.

	Option	Impact on Riders	Fiscal Impact	Implementation	Comments
	ADA Paratransit Eligibility Certification Process				
4	**Enhance eligibility certification program:** • Rebrand certification process as a "transportation" assessment to highlight all accessible transit services • Have applicant responsible for obtaining completed healthcare professional form • Information for in-person interview should direct applicant who uses a mobility device to bring the one used when traveling in the community (vs. what might be used in the home) • Centralize tasks in the certification process into one office	Potentially positive	None	• Staff action • Centralizing tasks to one office may require direction in RFP for certification contractor	Renaming provides focus on abilities rather than disabilities. Current process somewhat disjointed with tasks in 2 different locations.
5	**Establish age policy for children:** • Determine age at which children can travel alone on both fixed route and paratransit to strengthen ADA paratransit certification process (e.g., children under the age of X must travel with an adult)	Negative for those interested in ADA service for very young children	Potential for minimal cost savings	• Policy determination	Currently, a child of any age can be certified for ADA paratransit. Policy would allow the process to evaluate the functional mobility of the child with disability traveling together with the adult, rather than the child alone.
6	**Provide free fare on fixed route for conditionally eligible riders**: • Allowing riders with conditional eligibility to use fixed route for free incentivizes trips on fixed route, with savings from trips diverted from Open Door	Positive for condition-ally eligible riders	Potential for minimal to modest cost savings	• Policy determination	ADA regulations include the category of "conditionally eligible," recognizing that some riders with disabilities can use fixed route some of the time and/or for some of their trips.

	Option	Impact on Riders	Fiscal Impact	Implementation	Comments
7	**Provide one-on-one travel training**: • Providing individualized instruction to individuals with disabilities on how to use accessible fixed route is more effective than group training • Linking eligibility certification and travel training is a good practice as skills for assessing functional mobility and for travel training are transferable	Positive for those able to use fixed route	Minimal cost increase	• Include requirement and resources for one-on-one training in scope of services for eligibility contractor	During study outreach, stakeholders suggested that travel training should be offered to all applicants for ADA paratransit.
	ADA Service Criteria				
8	**Monitor on-time performance for trips booked to appointment time**: • IndyGo's performance framework includes a timeliness standard for trips that are time-sensitive (e.g., trips to work, to medical appointments)	Positive	None	• Staff action and coordination with contractor for data reporting	Outreach efforts found concerns about late trips for time-sensitive trips. Monitoring can be done on sampled basis.
9	**Review trip negotiation procedures for trip requests:** • ADA regulations define specific rules for the trip request process, with an allowable "negotiation window" and with specific reporting practices related to that window	Positive	None	• Staff action and coordination with contractor for data reporting	Outreach efforts found riders questioning the use of trip negotiation during trip request process. Consultants' observations in Call/ Control center witnessed a few instances of trips booked beyond the ADA negotiation window.
	Current Scheduling/Dispatch Software				
10	**Improve use of Trapeze:** • Various short-term improvements are identified to improve trip booking process and dispatch procedures	Positive	None	• Administrative access to Trapeze for the contractor's general manager will facilitate implementation	While Trapeze will be used only for 4 more months, various "fixes" will lead to improved Call/Control Center operations.

B. Options Requiring Further Consideration

	Option	Impact on Riders	Fiscal Impact	Implementation	Comments
Organization of Transit Agency					
1	**Create accessibility manager position/office to oversee ADA compliance:** • Links accessible fixed route and ADA paratransit together • May facilitate new attention and resources for transit services for riders with disabilities • Focus is day-to-day operations, differentiated from the current position of Director of Compliance and Civil Rights	Positive	Minimal increase	• Transit agency decision	Aligns with goal of the ADA law: *ensure people with disabilities have equality of opportunity, a chance to fully participate in society, are able to live independently, and can be economically self-sufficient.*
Provision of ADA Paratransit					
2	**Maintain ADA service countywide**: • Provide improvements to ensure ADA performance levels throughout county • Status quo with performance improvement	Positive	Possible modest to moderate increase	• May require contract revision	Additional capacity may be needed to ensure ADA performance levels achieved throughout county.

3	**Maintain ADA service countywide and provide all riders a same-day option:**
	• Provide improvements to ensure ADA performance levels throughout county
	• Provide all ADA certified riders with a same-day option:
	  • Use TNCs (e.g., Uber/Lyft) and supplement with taxis to ensure ADA and Title VI compliance; or
	  • Use taxis only
		Positive	Possible modest to moderate increase may be offset by potential for minor savings with same-day option. Savings depend on structure of same-day service.	• Design same-day program. Consider a pilot to test.	Same-day option will divert some ADA trips to less expensive option. Degree of diversion will depend on design of program. Stakeholder feedback expressed some concerns about use of TNCs (e.g., driver training, liability). Current taxi voucher programs no longer needed or they need a re-design.

	Option	Impact on Riders	Fiscal Impact	Implementation	Comments
4	**Provide ADA service in required area and "premium service" for rest of county:** • Ensure service in required area meets ADA performance levels • Limits to "premium service" to be identified (e.g., higher fare; fewer service hours)	Positive inside service area; less positive outside.	Potential for minimal decrease	• Consultation with disability community • Contract revision • Change to policies • Outreach/ Education	FTA defines service beyond what is required as "premium" and limits to service can be imposed. Consider role for taxi voucher programs.
5	**Provide ADA service in required area and "grandfather" current riders residing outside**: • Ensure service in required area attains ADA performance levels • Allow current ADA certified individuals residing outside ADA area to continue using service through "grandfather" clause	Positive inside service area; positive for current ADA riders living/ traveling outside ADA area. Negative for others with disabilities not yet certified or new residents with disabilities who move into county.	Potential for modest savings in future years	• Requires consultation with disability community • Contract revision • Change to policies • Outreach/ education	Data analysis for Jan.-Mar. 2019 found 200 individuals with home addresses outside ADA required area. Additional analysis required to assess longer time period. Grandfathering is an approach used by a number of transit agencies to address cost/demand for ADA paratransit. Consider role for taxi voucher programs.
6	**Provide ADA service only in ADA required area:** • Provide the required ADA service in the ADA-required service area, defined as 3/4-mile corridors of fixed routes	Positive for ADA riders traveling inside ADA area; Negative for those traveling outside or with residences outside. ADA certified riders can use the service if they come into the service area.	Modest savings	• Consultation with disability community • Contract revision • Requires major change to policies and outreach/ education.	Stakeholder discussions did not favor an option that reduces service to the ADA minimum requirements. Consider role for taxi voucher programs.

C. Contractual Considerations

	Option	Impact on Riders	Fiscal Impact	Ease of Implementation	Comments
Current Contract					
1	**Reconsider monthly payment structure for contractor**: • Allow payment for varying monthly revenue hours within annual hours budgeted	Positive to the extent that monthly revenue hours match monthly ridership demand	None	• Staff action	Current process limits monthly payment to 16,500 revenue hours (12 mo. average of 198,000 annual budgeted revenue hours). Does not account for months of varying lengths and seasonal ridership pattern.
2	**Reconsider performance standards and incentives/liquidated damages (LDs):** • A continuation of countywide service should review certain performance standards and incentive/disincentives for possible adjustment.	None	Minimal increase to extent fewer LDs	• Staff action	Current framework for incentives/ liquidated damages over-balanced to penalties. Certain standards should be reviewed.
3	**Consider "trigger" clause in next contract to facilitate possible cost adjustment:** • For next contract cycle, consider including "trigger" clause allowing for negotiation of fixed and variable cost with defined percentage change in IndyGo's requirements.	None	None for writing RFP/ contract	• Procurement action	Facilitates change to IndyGo's requirements for ADA paratransit without opening up entire contract.

	Option	Impact on Riders	Fiscal Impact	Ease of Implementation	Comments
Dialysis Taxi Voucher Program					
4	**Provide accessible service for the dialysis voucher program:** Options- • Encourage/incentivize Yellow Taxi, which has accessible vehicles, to become a provider. • Lease 2-3 of the 6 accessible mini-vans provided to the contractor to Triple A, the current taxi provider. • Purchase 2-3 accessible mini-vans and lease to Triple A.	Positive	None to modest increase, depending on option.	• Depends: may entail obtaining Yellow Taxi's participation; may require providing accessible mini-vans to Triple A and negotiating lease agreement.	One taxi company (Triple A) provides the dialysis voucher program but has no accessible vehicles. Providing service for dialysis riders using wheelchairs is necessary to meet ADA's equivalency requirements. Contractor reports using mini-vans infrequently.
5	**Meet FTA drug and alcohol testing requirements**: Options- • Encourage/incentivize a second taxi company to participate • Include Triple A's drivers with contractor's drivers/safety sensitive staff who are now in the testing pool • Require Triple A to comply with drug and alcohol testing	None	None to modest increase, depending on option	• Depends on option	For taxi subsidy programs, FTA waives drug and alcohol testing requirements if riders have a choice of taxi companies to use. If only one, the taxi company is considered to be a contractor and "stands in the shoes" of the transit agency.

Endnotes

1. TCRP Report 124, Guidebook for Measuring, Assessing, and Improving Performance of Demand Response Transportation by KFH Group, Inc. in association with Urbitran Associates, Inc., McCollum Management Consulting, Inc., and Cambridge Systematics, Transportation Research Board, Washington, D.C. 2008.

2. TCRP Synthesis 135, ADA Paratransit Service Models, by W. Rodman and W. High, Nelson\Nygaard Consulting Associates, Transportation Research Board, Washington, D.C., 2018)

3. Topic Guides on ADA Transportation, Telephone Hold Time in ADA Paratransit, prepared by Disability Rights Education & Defense Fund (DREDF), funded by the Federal Transit Administration, June 2010.

4. Indianapolis Public Transportation Corporation (IndyGo) Paratransit Compliance Review, Final Report, June 2016 at https://www.transit.dot.gov/regulations-and-guidance/civil-rights-ada/indianapolis-public-transportation-corporation-ada.

5. Paratransit Peer Review for the RTC of Southern Nevada, by Hickory Ridge Group, LLC, Las Vegas, NV, 2018.

6. TCRP Report 204, Partnerships Between Transit Agencies and Transportation Network Companies, by Nelson\Nygaard Consulting Associates and KFH Group, Inc., Transportation Research Board, Washington, D.C., 2019.

Attachment A: Open Door OTP and On-Board Travel Times

Introduction and Purpose of Attachment

Following the submittal of the draft of the Tasks 2 and 3 Report and with concerns about the contractor's performance in the summer of 2019, we provided supplementary assessments of Open Door's trip timeliness as measured by OTP and of on-board travel times.

Open Door Trip Timeliness

Based on the time period assessed for the study—January 2016 through April 2019—data for OTP showed improvement by late 2018 from the contractor's early months after the transition. However, the summer months of 2019 showed OTP was declining, raising new concerns about performance.

Given the concerns, we examined OTP from January 2019 through half of September 2019. We specifically assessed the degree of lateness for the trips outside the 30-minute on-time window; see Table A-1.

Table A-1: Open Door Trips On-Time Performance, January 2019 - Partial September 2019

Month/ Year	On-Time Percent	Late Paratransit Trips, by Minutes Late									
		1-15	%	16-30	%	31-60	%	61-90	%	91+	%
Jan. 2019	92.3%	978	4.1%	503	2.1%	289	1.2%	55	0.2%	26	0.1%
Feb. 2019	87.1%	1457	6.2%	752	3.2%	582	2.5%	146	0.6%	81	0.3%
Mar. 2019	92.6%	964	3.9%	513	2.1%	291	1.2%	49	0.2%	16	0.1%
Ap. 2019	89.6%	1453	5.8%	648	2.6%	371	1.5%	73	0.3%	30	0.1%
May 2019	89.7%	1255	5.2%	703	2.9%	410	1.7%	98	0.4%	38	0.2%
Jun. 2019	92.2%	821	3.8%	550	2.5%	267	1.2%	41	0.2%	12	0.1%
Jul. 2019	88.8%	1328	5.8%	727	3.2%	420	1.8%	72	0.3%	21	0.1%
Aug. 2019	84.8%	1617	6.7%	1093	4.5%	754	3.1%	159	0.7%	45	0.2%
Partial Sep. 2019	83.2%	806	7.4%	548	5.0%	376	3.5%	70	0.6%	26	0.2%

The data show that the contractor achieved a monthly OTP close to 90% or 90% and higher from January through July. By August, the monthly OTP percent dropped to 84.8%. As discussed in the body of the report, an OTP of at least 90% is considered reasonable for an ADA paratransit service. What is important to monitor is the lateness of trips beyond the window. Trips that are late by no more than 15 minutes are generally not problematic from a performance evaluation perspective. But late trips beyond that, such as those that are late by more than 30 minutes and particularly more than 60 minutes, are not acceptable. Such late trips are often defined as "excessively late."

Transit agencies define excessively late in varying ways, including more than 20 minutes, 30 minutes, and even 60 minutes past the window. Some transit agencies will allow a very small percent of excessively late trips before a penalty is assessed, for example, liquated damages apply when more than 0.75% of trips are late by more than 30 minutes.

For the months of January 2019 through half of September 2019, the data for Open Door show that between 1.5% and 4.3% of trips are more than 30 minutes after the 30-minute on-time window; see Table A-2. This means that those riders waited one hour or more for their vehicle to arrive for the pick-up.

Table A-2: Open Door Trips Late by 30 Minutes or More

Month/ Year	On-Time Percent	Trips > 30 Min. Late	% Trips >30 Min. Late
Jan. 2019	92.3%	370	1.5%
Feb. 2019	87.1%	809	3.5%
Mar. 2019	92.6%	356	1.4%
Ap. 2019	89.6%	474	1.9%
May 2019	89.7%	546	2.2%
Jun. 2019	92.2%	320	1.5%
Jul. 2019	88.8%	513	2.2%
Aug. 2019	84.8%	958	4.0%
Partial Sep. 2019	83.2%	472	4.3%

OPEN DOOR TRAVEL TIMES

Following the submittal of this Tasks 2 and 3 Report in draft, we also took a closer look at Open Door travel times. Using detailed trip reports from Trapeze for January 2019 through March 2019 that include riders' on-board travel times, we selected a small sample of trips within each of the four categories of trips in relation to the ADA service area and looked for comparable fixed route trips.

- **Inside-Inside** –origin and destination inside ADA service area
- **Outside-Inside** – origin outside ADA service area and destination inside
- **Inside-Outside** – origin inside ADA service area and destination outside
- **Outside-Outside** – origin and destination outside ADA service area

For the first category of trips (both trip ends inside the service area), we selected at least two trips within 10 to 30-minute time increments for Open Door on-board travel times. For example, in this first category, we selected two Open Door trips with travel times of 20 to 29 minutes; three trips with travel times of 30 to 39 minutes; two trips with travel times of 40 to 49 minutes; three trips from 50 to 59 minutes, and so forth.

With the large majority of trips within the first category, we selected a larger number of trips to assess in this category relative to the other three categories. For the other three categories of trips, we selected a small sample of Open Door trips that ranged in on-board travel times from 30 to 59 minutes, 60 to 89 minutes, and 90 plus minutes.

We then looked for comparable fixed route trips for each of the selected Open Door trips using IndyGo's online Trip Planner and compared the travel times, assuming a comparable fixed route trip was identified. This is the analysis recommended by the FTA, and it is time-consuming to conduct when done manually. (Trapeze has a module that can automate these comparisons.)

Note that the Trip Planner cannot use dates in the past: the application requires the use of a current or future date, which meant that the exact date of the Open Door trip could not be used for the comparison. For example, if the sampled paratransit trip took place on Monday, February 11th, a future Monday was used for a date for the possible trip, such a Monday in the week following our analysis. We also used the same time of day for the comparison.

Table A-3 summarizes the assessment. While our samples are quite small, the analysis suggests that about half of Open Door trips within the required ADA service area are shorter than comparable fixed routes trips; about 20% are 30 minutes or less longer than fixed route, which would be considered reasonably comparable according to the FTA's suggested analysis; and about 30% are more than 30 minutes longer than comparable fixed route trips.

For Open Door trips with one or both ends outside the required ADA service area, our analysis shows that a minority to few or none of the Open Door trips have a comparable fixed route trip. As one example, in the outside to inside category (trips with an origin outside the ADA area and a destination inside), one of the sampled Open Door trips had a travel time of 134 minutes. The IndyGo Trip Planner found a somewhat comparable fixed route trip that would take 124 minutes and require: 3 bus trips as well as 25 minutes of walking to the first bus and then 19 minutes of walking to the destination. While this paratransit trip is not required from a strict ADA perspective (since it originated outside the ADA service area), the Trip Planner found a way to make the trip on fixed route. Recognizing that the identified fixed route trip is very inconvenient, the comparability assessment would have deemed the Open Door trip reasonably comparable to the fixed route trip, given that it's only ten minutes longer.

Table A-3: Travel Time Comparisons Between Open Door Trips and Comparable Fixed Route Trips

Open Door Trips Relative to Required ADA Service Area	Number of Open Door Trips:						
	Sampled	With a Comparable FR Trip	Shorter than Comparable FR Trip	1-30 Minutes Longer	31-60 Minutes Longer	61-90 Minutes Longer	Greater than 90 Minutes Longer
Inside to Inside	44	42	21	8	5	2	6
Outside to Inside	20	5	1	1	3	--	--
Inside to Outside	19	2	2	--	--	--	--
Outside to Outside	12	0	--	--	--	--	--