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City Council's Committee on Transportation & Public Utilities and Committee on the Environment

Testimony of Sarah Clark Stuart, Executive Director, Bicycle Coalition of Greater Philadelphia

Thank you for the opportunity to testify today. The Bicycle Coalition of Greater Philadelphia applauds Councilman Greene for introducing Resolution 181113 and for holding this hearing regarding how to diversify the transportation options for Philadelphians.

As you know, Philadelphia has two very important plans that outline many values and goals related to transportation that the Kenney Administration has set for itself.

Connect, Philadelphia's 2018 strategic transportation plan has four important values:

1. Safety – A safe transportation system for all users, in all neighborhoods. Preserving human life should take priority over convenience.
2. Opportunity & Access – A transportation system that provides opportunities and access regardless of a person's ability or disability.
3. Sustainability – A system that uphold the City's commitment to reducing carbon pollution, be resilient to a changing climate, improve local air quality, and manage stormwater runoff.
4. Health – Promote healthy lifestyles by making walking and bicycling easier, more convenient, and safer, while reducing air pollution and noise

Philadelphia's Greenworks Plan envisions a City where all Philadelphians:

- Have access to healthy, affordable, and sustainable food and drinking water.
- Breathe healthy air inside and outside.
- Use clean, efficient, affordable energy.

- Prepare for climate change and reduce carbon pollution.
- Benefit from parks, trees, stormwater management, and healthy waterways.
- Have access to safe, affordable, and low-carbon transportation.
- Waste less and keep our neighborhoods clean.
- Benefit from sustainability education, employment, and business opportunities.

The Bicycle Coalition believes that the electric bicycle and scooter industry that is the topic of today's hearing offers considerable promise to support these these City's public policy values.

In particular, dockless systems of scooters and bicycles for that matter could enhance transportation options and access in neighborhoods that need them the most. These are the neighborhoods where motor vehicles and transit are generally the only means of transportation available, where bicycles are not commonly used for transportation, and where low-cost options such as bikeshare are not yet available.

As you well know, Philadelphia's Indego bike share, in operation since 2015, has been hugely successful at adding a new transportation option for many neighborhoods. The bike share zone has as it currently exists covers Center City, parts of West Philadelphia, South Philadelphia and North Philadelphia. Indego has been leading the nation in terms of bringing and supporting bike share genuinely and successfully to low income and underserved communities.

But, other neighborhoods have not yet benefited from bikesare. A dockless e-bike or e-scooter program has the capacity to improve mobility options to many more neighborhoods, such as in Southwest Philadelphia, West Germantown, East and West Mt. Airy and the Northeast.

For that reason, we have already urged the Administration to issue a regulation and permit to pilot dockless e-bicycles as soon as possible, something it that has been in the works since Council issued the necessary ordinance in July 2018. Moreover, as soon as they are deemed legal by the General Assembly, we encourage the City to permit a pilot of dockless scooters.

Because many other cities have had experiences with dockless systems, including scooters, Philadelphia has the advantage of being among the last large cities to allow the technology and can learn from cities such as Baltimore, Nashville and Charlotte and benefit from lessons learned when designing a pilot.

I represent an organization that for the past 40+ years has been advocating to put more people on bicycles. Scooters are new to us and are new to the transportation industry and public policy world. And certainly, they come with a different set of issues that require some new solutions. But, many of

the problems that bedevil greater usage of bicycles in the United States, such as safer bicycle infrastructure and greater accommodation of people using bicycles in the transportation network, have, solutions that will enhance the built environment for those who want to use scooters as well.

There is an important difference: scooters appear to have a lower threshold of acceptance among persons who don't already use a bicycle. For example, a survey conducted by the Portland Bureau of Transportation found that 74% of users of scooters reported never using their bikeshare and 42% had never bicycled. The potential for more people to use a slow moving vehicle like a scooter and not use a car for a short trip is worth testing out. One statistic I would leave you with is that nearly a quarter of short trips (under two miles) in Philadelphia are taken by car. That's much too high. If scooters can replace a portion of those car trips, Philadelphia will have made good progress toward meeting its sustainability and transportation goals.

We predicate our support for dockless scooters on the implementation of best practices, such as those listed below.

Scooter revenue received by the City should be used to improve road and bicycle infrastructure

No one disagrees that the quality and state of repair of Philadelphia's entire road network and bikeway network needs improvement. Despite the efforts of Mayor Kenney to add a second paving crew and a Vision Zero maintenance crew, the Streets Department still needs more staff capacity and funds available for asphalt and thermoplast to significantly cut down the 1000 mile backlog of streets that need to be repaved and restriped with traffic calming measures. And this problem does impact the bikeway network; there are at least 20-30 miles of faded bike lanes in dire need of re-striping, and other maintenance challenges such as delineator posts in need of replacement. Since last year, we have been urging Mayor Kenney to add more funding to the Streets Department capital budget to create a separate line item to enable maintenance of bike lanes and other traffic calming devices to occur with more frequency. I encourage City Council to better understand the challenges being faced by the Streets Department.

Other cities have entered into agreements with private e-scooter companies so that a portion of their fees are contributed expressly to help improve and maintain their bikeway infrastructure and we urge the City to enter into a similar agreement. Philadelphia and Council should funnel that funding directly back to the Streets Department for the purpose of installing, maintaining and upgrading Vision Zero projects and the bikeway network and not simply allow it to be deposited into the General Fund.

If Philadelphia's experience with e-scooters is similar to that of Baltimore, it will make it even more of an imperative to improve the quality of our streets and bikeway network. Instead of "if you build it they will come"; it's more like "they are here, let's build it faster." It's not as if the City doesn't know how to do improve its streets and make them safer, it does. But Council and the Mayor need to give the City's Streets Department the capacity and resources necessary to make it possible. The pace of improving and making Philadelphia's roads and bike lanes safer needs to accelerate. The status quo isn't good enough. And resources and political will are the barriers.

Ensure Transportation Equity

There are methods that can be used to ensure that dockless e-bikes or scooters are indeed made available in neighborhoods that particularly need new modes of transportation. Several listed below are being used by other cities. We would encourage a pilot program to specifically made equitable distribution of e-scooters in low income neighborhoods its top priority.

- All Operators should provide the City with an equity plan which shall detail the education of, marketing to, and engagement with low-income communities and serving the needs of people with disabilities.
- Based on the equity plan and consultation with the City, Operators should re-distribute e-scooters ensure access by people with low-income and in neighborhoods which have not been historically well served by transit.
- Operators should offer discounted rides or monthly rates to people with low incomes by, for example, by verifying enrollment in public assistance programs, such as Indego does.
- Operators should include a cash payment option and a non-smartphone option to improve access for those without smartphones and/or bank accounts.
- Operators should prioritize equity when hiring local contractors.

Enforce and Discourage Sidewalk Riding and Cluttering

Two major concerns of any dockless system is cluttering of sidewalks with bikes or scooters and people riding on sidewalks. Again, past experience gained by other cities has educated private companies on how to best minimize these two problems.

- Operators should require an in-app safety and parking tutorial for all new users, with periodic refreshers.
- Operators should ensure scooters adhere to the same rules and regulations that apply to bicycles in the City of Philadelphia and Commonwealth of Pennsylvania, unless otherwise specified by law.
- Operators should undertake effective education to discourage riding on the sidewalk

- Operators should encourage use of small vehicles on bike lanes and sidepaths.
- Operators must require riders to park the small vehicles in appropriate locations
- Broken scooters should be removed within 6 hours of being reported between 7am to 8pm weekdays,10-6pm weekends, and by the next day for reports made overnight.

Safety

Safety issues such as the rate of injuries as compared to other modes and usage by underage persons are important considerations. I am attaching a summary analysis that we prepared of three recent reports for your review: the 2018 e-scooters findings report by Portland Bureau of Transportation, a summary by the Multnomah County Health Department review of data from the pilot study and a recent article by Consumer Reports.

Portland Oregon's pilot study is probably one of the best that documented injury rates from scooters by reviewing hospital and EMT data. The County's Health Department found that there was "no evidence of injury rates that would discourage a further scooter pilot in the City of Portland."

The evaluation methods used by PBOT and Baltimore provide good guidance that can be used by Philadelphia when considering developing its own pilot program.

Data

Data sharing is a critical element of a good relationship between scooter operators and the communities they work in. Data gleaned from thousands of trips are an invaluable resource to transportation planners, helping them to make more informed choices about future infrastructure.

Operators should share the following data with the city

- Origin and destination data
- Number of total trips
- Deployment locations by neighborhood

PUBLIC HEALTH IMPACT OF E-SCOOTER FINDINGS

An analysis of Portland Bureau of Transportation's [PBOT] E-scooter findings report, Multnomah County Health Department's Scooter-related Injuries in Multnomah County, Consumer Reports' "E-Scooter ride-share industry leaves Injuries and angered cities in its path" article and other reports

Analysis by: Leigh-Ann Charles

Overall Findings[1,2,3,4]

1. There is not enough comprehensible data to compare the safety of e-scooters to other modes of transportation. Risk of injury increases with miles traveled, but this is similar across various modes of transportation.
2. Portland county data was the only data known to the researcher to report the rate of scooter-related injury per miles traveled using emergency room and urgent care visits. However, the data failed to adequately determine fault, severity, or scooter type (private, child, or e-scooter) per occurrence.
3. Better surveillance reports are needed to determine the impact of e-scooters on the environment.
4. E-scooters are a viable source of transportation for communities of color and underserved communities, but greater education efforts (on operation and city laws) are needed to improve use.

Background[1]

E-scooter pilot study was conducted by PBOT from July 23 to November 20.

Summary[1]

- 700,369 trips were made using e-scooters
    - Higher ridership occurred from August to mid-October
    - Riders were less inclined to ride on the sidewalk when streets had speeds less than 30 mph
- Based on a city-wide representative poll:
    - 62 percent of Portlanders embraced e-scooters
        - 71 percent were under 35 years of age
        - 74 percent identified as people of color
        - 66 percent had <$30,000 income
    - 71 percent of Portlanders used e-scooters for transportation
    - 34 percent of Portlanders used e-scooters in place of driving and ride-sharing (i.e. UBER or LYFT)
    - 48 percent of visitors used e-scooters instead of driving and ride-sharing
- There was an estimated 176 scooter-related emergency and urgent care visits during the pilot, although there was no distinction of the type of scooter involved

Public Health Impact[1]

Safety Impact[1]

Problem:
Although illegal, e-scooter users were seen riding on sidewalks. To better understand on-the-ground practices, PBOT observed 128 e-scooter users at 7 locations from October 2 to October 12 between 4pm and 6pm. Users were observed riding on sidewalks when streets had posted speed limits of 30mph or more and streets had no protected bike lanes. Users did not use sidewalks on streets with a neighborhood greenway. Less users rode on sidewalks when streets had protected bike lanes.

E-scooter users were also seen occupying park trails near waterfront, etc., although motorized vehicles are not permitted in Portland Parks. However, many riders were unaware of these laws.

Public Concern:
Pedestrians and individuals using mobility devices expressed concerns that illegal sidewalk riders posed a risk to their safety. Streets are too small for e-scooters and other users, and the operating speed of e-scooters (≤15mph) may be too fast and unsafe for other users sharing the sidewalk.

Response:
PBOT increased user education and on-the-street engagement

Overall Limitations:
1. PBOT observed a small number of users.
2. October is a popular month for visitors, some with little to no experience riding scooters or bicycles.[5]
3. Ridership for the week is at its highest on Saturdays between 4pm and 6pm. Therefore, it is possible that most users riding illegally could have been visitors with little to no education on e-scooters and city laws, and with a lower comfort level of riding in an urban setting than Portlanders. (Solution: better education for all users especially visitors)
4. Public concerns could've been higher because e-scooters are a newer form of getting around (Solution: During the second phase of the pilot, observe differences in public opinion in those exposed to e-scooters (from first pilot) and those not previously exposed to e-scooters to better gauge if concerns were related to safety or panic from a new form of transportation)

Problem:
Less than 10 percent of parking observations impacted pedestrian movement and ADA access

Public Concern:
Illegally parked scooters were perceived as hazardous to pedestrians, those using mobility devices, and the visually impaired. The biggest concern were illegally parked e-scooters on small streets.

Response:
User observation was conducted between October 19 and November 28 to better understand parking violations. Based on online complaints and user observations, greater education efforts were implemented. PBOT saw a reduction in online complaints post efforts.

Limitations:

1. User observation was conducted during a time when ridership was low. (Solution: to better gauge incidence of illegally parked scooters and its impact on the community, the second phase should conduct user observations during peak months when ridership is high among Portlanders and visitors)
2. Complaints could've improved as the comfort level of e-scooters grew

Injury[1,2]

Finding

There were 176 scooter-related emergency and urgent care visits during the pilot period. There were 700,000 trips during that time. Scooters accounted for approximately 5 percent of all transportation-related injuries in the county during the pilot. There were more injuries related to bicycles than scooters seen at emergency rooms and urgent cares during that time.

Limitation

Records only represent scooter users that have been injured and visited an ER or urgent care. Some injuries may have been unreported by users possibly because they were less severe.

There is no mention of the type of scooter involved. The scooter could be an e-scooter, child scooter, or privately-owned scooter.

There is not enough data on the rate of injury per number of miles traveled by bicycle during the pilot, so it is too early to suggest that scooters are safer than bicycles. Additionally, there is not enough comprehensive data to compare scooter injuries to other modes of transportation. Most results are based on crude data and is not adjusted for things such as age, mode of transportation, miles traveled per mode of transportation, experience using a scooter, etc. Therefore, the data fails to cater for differences in populations and cannot determine the safety of scooters in comparison to other modes.

Finding

During the pilot period, the overall rate of emergency department and urgent care visits for scooter injuries was 2.2 per 10,000 miles traveled on rental e-scooters, and 2.5 per 10,000 trips taken (pp2)

Weekly visits rose (approximately 20 visits per week) between late August and early September and then reduced to pre-pilot levels (less than one visit per week) in November.

Possible explanation

August to September saw the greatest number of trips and miles traveled by e-scooters. It is suggested that the greater miles traveled, the greater the risk of injury. This is a similar observation in cars.

The number of injuries may have reduced because users and those sharing the road and sidewalk could become more comfortable with e-scooters. Exposure to education and e-scooters could've increased riders comfort level for this mode of transportation.

Finding
Of all incidents, 83 percent were due to falls (no reported contact with others or cars), 14 percent were due to collision with motorists, and a small percentage was due to collision with other scooters and pedestrians. Only 1 percent of triage notes included sidewalk riding and scooter malfunctions, and 9 percent of intoxication. Helmet use was only mentioned in 29 visit reports. Of those 29 visits, six reported wearing a helmet.

Limitations
There is little data on fault of the incident, so e-scooter users may not be responsible.

There is little data reporting use of helmets, so it is difficult to conclude that helmets were the cause for injury. (Solution: future reports should mandate all medical personnel to query the use of helmets for scooter-related injuries).

Finding
The most common injuries were related to the head and neck with secondary injuries including forearm fractures and superficial injuries to knees and legs. There was no evidence of fatal scooter injuries during the pilot.

Limitation
Severity of injury was determined if an ambulance or concussion was mentioned in the triage notes of those involved in a scooter-related incident. Ambulances do indicate more serious injuries, but there was no direct method of categorizing severity from the data. (Solution: future studies should consider methods of categorizing data to determine severity, fault, etc.)

Problem
The majority of ED and urgent care visitors seen for scooter-related injuries were 18-44 years of age.

Limitation:
There was little data on exposure to education or e-scooters prior to injury

City Equity[1]
Based on city-wide data, 74 percent of people of color and those living in East Portland (a known population underserved by transportation) expressed interest in e-scooters. In two PBOT focus groups, 8 of 22 participants had rode an e-scooter. Others expressed concerns regarding the following:

- Lack of helmets and thus safety
- Difficulty in transporting kids
- No safe place for users to learn to ride
- Not suitable for all ages
- Safety linking credit card to account
- Fear of being overcharged
- Fear of racial harassment and profiling

- Lack of information and education regarding laws and e-scooter operation

Single, childless adults and children were more enthusiastic to use e-scooters than parents. Youth saw e-scooters as valuable modes of transportation during the summer when bus passes were inactive. Participants became more interested when they learned they could make money charging scooters.

Problem

Most e-scooter companies did not follow through with their commitment to place scooters in underserved communities. There were 243 deployed e-scooters in East Portland (9.6 percent of the total fleet). Of those deployed, 44,155 trips were made from East Portland with an average of 1.6 miles per trip (Center City trips average one mile). This indicates the demand for alternative transportation modes in this area.

Additionally, only 43 users were enrolled in a low-income payment plan.

Possible Solution

Demonstrate the demand for e-scooters in East Portland to companies as a means of improving deployment. Companies that are non-compliant could face penalties.

Environmental Impact[1]

E-scooters provide an alternative to cars, however the data is inconclusive regarding their environmental impact (i.e. immediate and long term effects of any emitted exhaust, battery disposal, e-scooter production, and more on the environment). More in-depth studies are needed to assist findings.

Other report findings

UCLA study[6,7,8,9]

Using retrospective data from two emergency departments in Southern California, Trivedi, Lui, and Antonio (2019) found 249 scooter-related hospital visits between September 2017 and August 2018. Of the scooter-related injuries reported, 91.6 percent were riders and 8.4 percent were nonriders. Helmet use was poor among users.

Limitations

The data failed to report rate of injury by number of miles traveled, demographics, or number of trips (Trivedi, Lui, Antonio, 2019, pp 3). The data did not investigate confounding variables (i.e. speed limits, access to bicycle lanes, geographic obstacles). Additionally, there was a rise in incidence of injuries as scooters become more accessible and ridership increased which is common when individuals are more exposed.

Bird and Lime[3,4]

Bird found the highest number of injuries in Los Angeles and San Diego, respectively. Most injuries were minor. The largest number of complaints were “riding on sidewalks” and “blocking the bike paths”, respectively.

Limitations
The data demonstrated the number of occurrences and did not account for confounders.

Based on other sources, Lime saw 32 major injuries and 27 minor injuries. No data was collected from their team.

Limitations
The data demonstrated the number of occurrences and did not account for confounders. Additionally, the data was reliant on claims, which presents potential bias and inaccuracy.

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