CIVL598P Assignment #4

COVID-related Transportation System Change

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With the first case of COVID-19 diagnosed in a central city back in late January, China is the first country that was affected by the pandemic. For this assignment, I analyse the transportation system changes in my hometown Zhuhai, a city located in southern China, with specific focus on the impacts and rational of these changes.

The first COVID-19 case in Zhuhai was diagnosed on January 20th, 2020. In respond to this health emergency, many sections of public transportation suspended partial services. The affected departments include buses, taxi, light rail, etc. On February 5th, the Zhuhai Public Transport Group announced the temporary suspension of 61 lines of bus services. The Guangzhou-Zhuhai Inter-city Rail reduced its operation frequency from 70 with limited passenger capacity per car in March. Mandatory mask policy is applicable for all modes of public transportation. Temperatures are taken before boarding buses and trains. Travellers are also required to scan QR code using either the mobile application of WeChat or Alipay for the purpose of case tracking. Only those travellers with a green health code after scanning will be allowed to board buses and trains.

Image 1. The Entrance of Zhuhai Light Rail Station

The control measure on public transportation was implemented based on the projected traveller volume during spring festival. Before the coronavirus outbreak in Wuhan, the passenger traffic of all modes of transportation in Zhuhai during Spring Festival in 2020 was projected to be 6.48 million trips. The reduction in public transportation services can eliminate social contact and cross infection during trips. The reduction in public transportation services and mandatory mask policy, together with the fear to use public transit led to a drastic decline in public transportation ridership.

Image 2. Bus stops at Zhuhai Light Rail Station

Due to the strict mandatory mask policy and the large-scale case tracking, these new changes in public transportation system did not result in a great switch in mode of transportation. According to Dataway, railway and bus remained the major modes of transportation in mid February and accounted for 25.7% and 29.4% of total travel respectively[1]. It is worth noted that bike sharing can be observed reviving in some other major cities in China. According to Meituan and two other major bike-share companies, ridership in Beijing has increased 120-187% after the coronavirus outbreak[2]. In Zhuhai,

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[1] Dataway, “零点发布最新报告：疫情之下 的公共出行 [The latest Dataway report: the public travel in the time of epidemic],” Sohu News, Last modified February 27, 2020, https://www.sohu.com/a/376382498_682144

[2] Urban Gateway, “3 Ways China’s Transport Sector Is Working to Recover from COVID-19 Lockdowns,” Urban Gateway, accessed November 18th, 2020, https://www.urbangateway.org/es/node/49421

a major bike-share company implemented “Disinfection for All” initiative and provides free disinfection services for all shared-bikes regardless of service provider.

While these changes can effectively eliminate the risk of cross infection, there are limitations in these changes that can pose negative impacts on some of the travellers. For example, seniors that are not familiar with mobile application may have difficulties accessing their own health code for public transportation. Public buses can no longer meet the need of low-income passengers who need to commute to work from suburban area to city center.

The change in public bus service is partially aligned with NACTO’s Streets for Pandemic Response and Recovery Guideline. The remaining bus lines in service in February provided reliable services between neighbourhoods. Transit operators and volunteers were engaged in QR code scanning and temperature taking processes to help reduce the impact to response time as the Guideline suggested. However, limited spaces and guidance were provided to unsure the implementation of social distancing while walking and waiting. As shown in Image 2, no markings or guidance is provided at the bus stops outside the Zhuhai Light Rail Station. As suggested in the NACTO Guidance, filling gaps in existing bike networks and routes should be prioritized as a pandemic response. There was no additional bike lane construction project implemented in the past few months even though the demand for bike-riding increased.

To sum up, the transportation system has been greatly impacted by the COVID-19 pandemic. Major changes in the system include reduction in public transit services, new policies of mask-wearing, temperature taking, and code scanning in public transportation, slight increase in bike sharing, etc. While these changes are effective in the control of disease spreading, improvements can be made in accordance to the NACTO Guidance on pandemic response and recovery and other related design guidance.

Bibliography

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