

Analysis of Community-based COVID-19 Prevention and Control in China

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Abstract: Research Purpose and Application Value: This study hopes to put forward some feasible reference logic in policy for the prevention and control of group epidemics in a small area, so as to reduce the burden of epidemic prevention and control at the national and local levels indirectly. **Research Method:** This study is based on typical cases. The selected cases have the characteristics of study, research and reference. This study lists and describes 7 cases of prevention and control of COVID-19 in communities in China since the outbreak of COVID-19 in 2020. The following are the main practices of these communities in community-based COVID-19 prevention and control. **Results:** Communities, as the Last Mile of epidemic prevention and control, have achieved some results in the prevention and control of COVID-19, including communication, monitoring, proxy services, construction of service team, et al., thus providing a feasible reference logic in policy for the prevention and control of group epidemics in a small area.

Keywords: COVID-19, Research Purpose, Application Value

1. Introduction

1.1 Introduction and Research Purpose

From the end of 2020 to the beginning of 2021, the growth rate of COVID-19 cases in China was once again highly concerned by people across the whole country. Many colleges and universities in China temporarily decided to advance the winter vacation and let their students go home, of which Hebei University was a typical example. On the one hand, such a decision was able to prevent the outbreak of mass epidemics in colleges and universities. But on the other hand, college students came from all over the country, so the early vacation would bring great difficulties to local epidemic prevention, and may even spread the epidemic to the whole country. In other words, the early vacation of colleges and universities avoided the outbreak of mass epidemic on campus as well as the prevention and control of epidemic on campus, but it increased the burden on the national and local epidemic prevention and control.

However, since the outbreak of COVID-19 in 2020, many communities in China have implemented the prevention and control of the epidemic within the community, so as not to increase the burden on the national and local epidemic prevention and control.

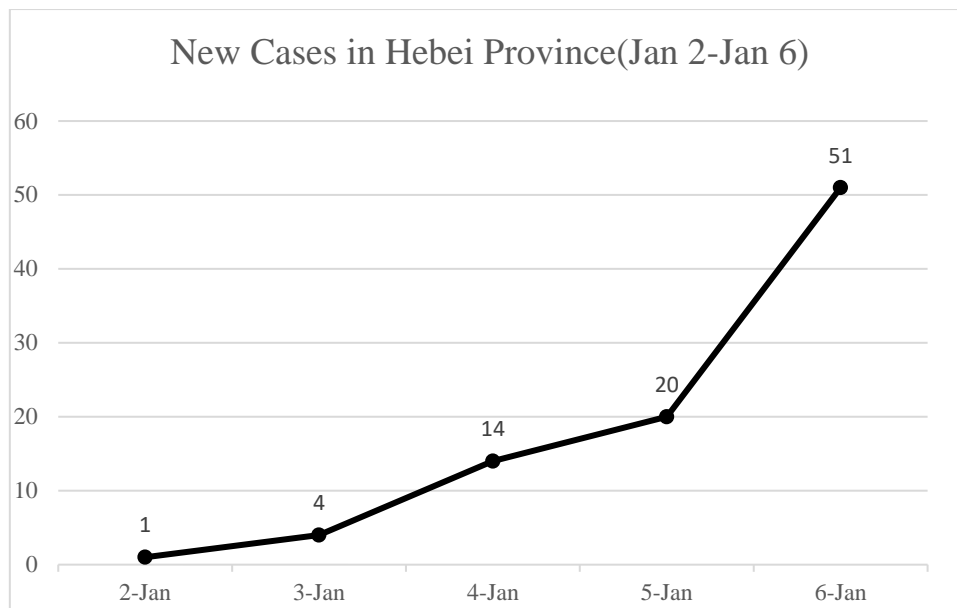
What are the characteristics of China's community epidemic prevention and control? What can we learn from them? This study will respond to this. Therefore, this study hopes to put forward some feasible reference logic in policy for the prevention and control of group epidemics in a small area, so as to reduce the burden of epidemic prevention and control at the national and local levels indirectly.

1.2 Background and Current Situation

On January 2, 2021, one COVID-19 case occurred in Hebei Province¹. On January 5, 2021, Xiaoguo Zhuang Village from Zengcun Town, Gaocheng District, Shijiazhuang City was adjusted to a High-risk Area² by the government. From January 2, 2021 to January 6, 2021, the number of COVID-19 cases in Hebei Province increased rapidly, as shown in the figure below (Figure 1).

¹ <http://www.nhc.gov.cn/yjb/s7860/202101/e5301d8c468b4608b28ed7d0f013c881.shtml>

² http://www.gov.cn/fuwu/2020-12/12/content_5569095.htm



Data Sources: http://www.nhc.gov.cn/wjw/xwtd/list_3.shtml

Figure 1: New Cases in Hebei Province (Jan 2-Jan 6)

Correspondingly, many colleges and universities in Hebei Province started the winter vacation in advance in early January. Hebei University announced the suspension of examinations and the emergent winter vacation on January 5, 2021³, which triggered a hot discussion on the Internet. At the same time, many colleges and universities across the country had similar practices.

Next, this study will sort out the news text, list and elaborate 7 cases of epidemic prevention and control in some communities in China since the outbreak of COVID-19 in 2020.

Some literatures have given positive comments on the role of communities in the prevention and control of COVID-19 in China. In addition to the above positive comments, there are some empirical data to support it.

Finally, this study attempts to find the characteristics of China's community epidemic prevention and control and lessons we can learn from, then provide a factual basis for the reference logic in policy.

2. Related work

Some literatures have given positive comments on the role of communities in the prevention and control of COVID-19 in China. Community, bureaucracy and market mechanism are the three major governance institutions (Gu and Li, 2020). Specifically, the characteristics of bureaucratic governance lie in command and control. The market mechanism is based on the relationship between impersonal and contract, and the relationship between market participants is characterized by both choice and competition. In contrast, community governance is characterized by commitment and compliance. The connections between community members may be community-based, related to emotions or other factors, and are committed to shared values, norms, and identities. They coordinate individual activities to maximize the collective interest of the community through reciprocal cooperation and mutual supervision. The study suggests that the scientific or professional community plays a key role in epidemic management, especially during the early warning phase. Hu and Qiu (2020) point out that integrating risk communication and community participation into the national public health emergency response system is critical for emergency response, which emphasizes community participation in joint prevention and control. According to Zhu and Cai (2020), the Community Governance System (CGS), an isolation measure that mobilizes the participation of leading communities in response to the challenges and problems posed by emergencies, is still unprecedented anywhere in the world at that time. The study describes a community governance structure with the following characteristics: there are two parallel administrative departments of the government, including grass-roots government units and branches of the Communist Party of China; The integration of the autonomous governance portfolio (community,

³ <https://new.qq.com/omn/20210105/20210105A0GZD300.html>

owner committee, property management company) with hierarchical governance components. Among them, the volunteers greatly alleviated the shortage of manpower, the communists' belief in and adherence to the same guiding principles made their cooperation smooth and efficient, and the community governance system expanded the meaning of the word Family to expand the spirit of solidarity in the fight against COVID-19. Zhang, et al. (2020) believe that civil society organizations are responsible for isolating residents in each community and helping to solve real life difficulties.

In addition to the above positive assessment, there are some empirical data to support it. As of 31 March 2020, contact tracing indicated that no cases were the result of intra-urban community transmission. Zou, et al. (2020) noted that after the outbreak of SARS in 2003, the health department of Shenzhen established a network to monitor and respond to new respiratory infections, including pneumonia of unknown cause (PUC). During the COVID-19 period, although Shenzhen did not implement a city-wide lockdown as Wuhan did, it took the lead in establishing a rapid response system to quickly detect the PUC and immediately deploy emergency preparedness to isolate close contacts of the PUC. In addition, a three-way working group developed ways for community officials, health workers and police to keep track of everyone. Lin et al. (2020) established a quantitative model, and one of the conclusions of this study is that in the prevention and treatment of COVID-19, traffic control and social isolation measures control the spread of the epidemic, and social alienation has a better effect than traffic control. Gilmore, et al. (2020) detailed 37 initiatives related to community participation by referring to 1112 articles and 32 articles, and identified the main actors of community participation as local leaders, community and faith-based organizations, community groups, boards of health care institutions, individuals and key stakeholders. They operate in a variety of functions, including design and planning, community entry and trust building, social and behavioural change communication, risk communication, monitoring and tracking, and logistics and administration. The study highlights how communities can play an important and positive role in prevention and control, and encourages countries around the world to evaluate existing community engagement structures and use community engagement approaches to support prevention and control of COVID-19. Guo et al. (2020) put forward that experience can be drawn from China's epidemic prevention and control strategy. Experience includes the strict implementation of quarantine strategies at the community level throughout the country, the need for strong government support to strengthen communities, and the need for training to develop policies for implementation.

To be more specific, Wei, et al. (2020) studied the relationship between grid governance and epidemic control in community participation. The Grid proposed by the institute is formed by fine division of existing urban or rural community responsibilities between links. In China, grid-based governance attempts to divide the basic social hierarchy into many responsible grids, insert transactions, organizations and people into specific grids, and complete the basic information collection comprehensively and quickly using modern technology. This study shows how grid governance can effectively help reduce or even prevent virus outbreaks. Zhang, et al. (2020) introduced some community-based COVID-19 prevention and control measures in mainland China, including population movement control, digital management, disinfection, and supply. Among them, population flow control includes access control, transport control, and aggregation control. Digital management includes community grid management, news media, and communication.

3. Research Method

This study is based on typical cases. The selected cases have the characteristics of study, research and reference. The characteristic of study is reflected in these cases, which can help us to understand the feasible reference logic in policy for the prevention and control of group epidemics in a small area. The characteristic of this study is reflected in that these cases can form the logical chain of this study. The characteristic of reference is reflected in the universality of these cases, as opposed to the particularity.

This study lists and describes 7 cases of prevention and control of COVID-19 in communities in China since the outbreak of COVID-19 in 2020. The following are the main practices of these communities in community-based COVID-19 prevention and control.

The following are the main practices of Lao-San-Dong Community from Wuhan, Hubei. First, the community dispelled rumors in time and built a WeChat online group to stabilize the residents' mind. Second, the community measured the temperature of the people in and out, disinfected frequently, and implemented a 24-hour closed management. Third, the community conducted a group purchase for

vegetable every four days, and the residents went downstairs to get the vegetables one by one.⁴

Then the main practices of Youhao Community from Tongling, Anhui. First, the community strictly checked the people and vehicles in and out. Second, the community staff and volunteers from CPC(the Communist Party of China) members formed an inspection team. They checked the situation of gathering to play cards, play chess, chat, et al., in the community, and persuaded them to leave. Third, the Community Grid Members timely grasped the situation of the people being observed by door-to-door body temperature monitoring. Fourth, the Community Grid Members posted publicity documents in the community, distributed publicity materials, and spread knowledge of epidemic prevention and control in door-to-door inspections. Fifth, the community staff and personnel from the community health service station provided door-to-door delivery of food, supplies and other services to the quarantined people. Sixth, the community gave full play to the role of the grid, strengthened personnel tracking, carried out comprehensive health monitoring for the people returning from Hubei epidemic areas, and urge them to stay at home for medical observation for 14 days.⁵

The following are the main practices of Wen-Hua-Li Community from Tianjin. First, street cadres and community workers closed the entrances and exits, leaving only two main entrances and exits for easy access, and inspected the residential areas and building doors that cannot be blocked. Second, the leaders of the community and volunteers in red vests and red sleeves measured the temperature of people who were entering the community and questioned them. Third, the community posted a sign that said Mobile Booth on the door of the duty room at the community's entrance, inviting the staff to rest inside.⁶

Next the main practices of De-Zhong Community from Guangzhou, Guangdong. First, relying on the Online Hall and online platform, the community launched a service action, posting publicity materials on the corridors and elevators, and inviting each family to send a health person aged 18 to 65 to participate in the community's COVID-19 prevention and control monitoring, who registered and measured the temperature of the people in and out. Second, the community's CPC(the Communist Party of China) Committee established a WeChat group, and encouraged the residents to break the stranger's psychology and sign up for volunteer services. Third, the Community Committee detailed the epidemic prevention and control plan, and set up Temporary Isolation Site at the entrances and exits of the community to properly settle those who had a fever and avoid cross-infection.⁷

Then the main practices of Liang-Tian Village from Guangzhou, Guangdong. First, for the villagers who did not implement the epidemic prevention and control, their annual share dividends would not be paid. Second, the village produced 30,000 copies of epidemic prevention guidelines for distribution. Third, the village extensively mobilized people and enterprises to participate in the epidemic prevention and control work of the village, in order to obtain material guarantee.⁸

The following are the main practices of Ling-Yun Community from Yongzhou, Hunan. First, the community was under 24-hour lockdown management, with two people on duty at the entrance and, and strict control over the entry and exit of personnel and vehicles. Second, through broadcasting, online groups and other ways, professional knowledge and relevant policies on epidemic prevention and control released by authoritative media were published. Third, the community workers dissuaded people from gathering every day. Fourth, the community disinfected frequently.⁹

The following are the main practices of communities in Yingquan District from Fuyang, Anhui, which were for residential communities with two or more COVID-19 cases. First, according to the First Order of the Emergency Command for Prevention and Control of COVID-19 in Anhui Province, residential communities with two or more COVID-19 cases should immediately issue a lockdown management notice through the website of the district government and the media, and take measures such as blocking the epidemic area and restricting the gathering of people in the communities. Second, launched by the Communist Youth League, the district set up a youth volunteer service for communities under lockdown management. The service was responsible for the purchase of necessities of the residents under lockdown management in the communities according to the families' needs, to ensure the normal life of the residents under lockdown management. The service also provided psychological health counseling to the residents under lockdown management. The residents were able to ask for help through WeChat group and telephone. Third, the district, approved by the higher party organization, set up a temporary Register

⁴ <https://www.chinanews.com/sh/2020/02-17/9094021.shtml>

⁵ http://ah.ifeng.com/a/20200205/8127433_0.shtml

⁶ http://www.cnr.cn/tj/jrtj/20200211/t20200211_524969440.shtml

⁷ http://mzj.gz.gov.cn/dt/mzdt/content/post_5660271.html

⁸ http://gdgz.wenming.cn/gzjj/202002/t20200210_6279392.htm

⁹ <https://baijiahao.baidu.com/s?id=1658318079524184294&wfr=spider&for=pc>

and measure the temperature of Branch in communities under lockdown management, in order to achieve grid management, and implement prevention and control measures to every household and every person. Specifically, a number of party groups were set up under the party branch. Each party group contacted residents on different floors, and communicated with residents under lockdown management and comforted them emotionally, to do its best to meet the residents' demands. Fourth, the district set up a logistics services group to focus on ensuring the distribution of masks and safety protection for the front-line staff. Fifth, medical teams were formed by the medical staff of the communities' health service center to provide medical services for the residents of the communities under lockdown management. The families in the isolated unit were placed under quarantine medical observation, and the body temperature was measured and recorded more than twice a day. Sixth, the communities strictly restricted the people in and out and personnel gathering, leaving only one entrance and one exit. Seventh, convenient service was set up inside the communities to assist the residents in paying water and electricity bills, collecting express services, et al. and temporary purchasing service was set up for the residents to buy fresh vegetables, fruits, rice and other daily necessities. Eighth, the district set up a service team in the communities under lockdown management, which provided disinfection service twice a day to public service facilities such as the square, elevators, stairs, trash cans and seats. Ninth, a letter explaining Five Measures and Three Separation was issued to the families under lockdown management, instructing the residents to take effective measures to protect home environment and personal hygiene and prevent the occurrence of disease.¹⁰

4. Conclusion

Communities, as the Last Mile of epidemic prevention and control, have achieved the following results in the prevention and control of COVID-19, thus providing a feasible reference logic in policy for the prevention and control of group epidemics in a small area.

In terms of communication, first, communities used online communities to spread professional knowledge and relevant policies on epidemic prevention and control, promptly refute rumors, and mobilize and recruit volunteers. Second, communities disseminated information through the posting of publicity documents, distribution of epidemic prevention guidelines, and transmission of COVID-19 prevention and control knowledge. Third, government websites and media helped communities under 24-hour lockdown management to issue lockdown management notice. Fourth, communities advocated service actions through online platforms.

In terms of monitoring, first, communities were under 24-hour lockdown management, and most of the entrances and exits were blocked. Second, communities implemented an entry and exit registration system and strictly checked the entry and exit of people and vehicles. Third, communities dissuaded people from gathering. Fourth, communities went to each residence to learn about those who under observation. Fifth, communities used the Grid to track people. Sixth, communities regularly disinfected public service facilities. Seventh, the community set up Temporary Isolation Site and properly settled people who had a fever, to avoid cross-infection.

In terms of proxy services, first, the community bought vegetables for groups regularly. Second, community workers provided door-to-door services such as delivering food and supplies. Third, convenient service was set up to assist residents in paying water and electricity bills and collecting express delivery services. Fourth, communities set up temporary shopping station to facilitate residents to buy daily necessities.

In terms of the construction of service team, the main body that played roles includes the temporary CPC (the Communist Party of China) branch, the logistics service team, the medical team, the youth volunteer service team of the Communist Youth League, and the volunteer service team composed of retirees. In addition, some communities extensively mobilized caring people and enterprises to participate in the epidemic prevention and control work, so as to obtain material support.

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¹⁰ <http://www.yqnews.net/cms/show-36253.html>

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