Forest Chemicals Review
www.forestchemicalsreview.com
ISSN: 1520-0191
July-August 2022 Page No. 1863-1869
Article History: Received: 02 April 2022, Revised: 15 April 2022, Accepted: 24 April 2022, Publication: 04 May 2022

On the Role of Wechat Big Data in Covid-19 Prevention and Control in Communities

Chengzhu He
School of Information, Xiamen University, Fujian, China

Abstract:

According to research, big data was born in the 1990s, the technology is popular because of its 4V function, now has infiltrated into all aspects of people's production, life and work, and will become an important foundation for future innovation, competitiveness and productivity. Practice has proved that big data governance is an important means of social governance. How to make full use of big data tests the modernization of governance system and capacity of organizations at all levels. The main goal of this paper is to study how big data is applied to all aspects of social life. Through research, mathematical statistics and other methods, the prevention and control measures of COVID-19 outbreak since the end of 2019 show that Wechat big data can provide accurate information on the physical status, contact information, geographical location, whereabouts and other aspects of the residents in the area for community epidemic prevention through information collection and authentication. This fully proves that Wechat big data is the first line of joint prevention and control of the epidemic, as well as the most effective defense against imported and spread of the epidemic. Firmly guarding the line of defense in the community can effectively cut off the channels for the spread of the epidemic, and building this line of defense cannot do without Wechat big data.

Keywords: *Wechat big, Data digital technology, COVID-19 community work.*

I. INTRODUCTION

Wu Hequan academicians pointed out that the use of big data is to strengthen the epidemic monitoring and analysis of large data of affirmation, is also the requirement to the Internet community, due to the unique mobile phone positioning, WeChat scan code to make it connected to the big data as our another "ID card" [1], the prevention and control in China COVID - 19 outbreak plays an important role. With the support of big data technology, we can track novel Coronavirus carriers online, and cooperate with the police and the public to ensure the safety of people's lives. Scan the "health code", and the community staff will accurately screen out foreign people; Community monitoring of the epidemic situation, tracking the whereabouts of people coming and going; Communities draw color-coded epidemic maps to make the local epidemic clear. In the context of current outbreaks, communities have applied big data technology to epidemic prevention and control, from epidemic data analysis to dynamic monitoring of travelers, providing strong support for scientific and precise epidemic prevention and control and livelihood protection.

Forest Chemicals Review
www.forestchemicalsreview.com
ISSN: 1520-0191
July-August 2022 Page No. 1863-1869
Article History: Received: 02 April 2022, Revised: 15 April 2022, Accepted: 24 April 2022, Publication: 04 May 2022

The research and development of big data, which originated in the 1990s, has already entered every aspect of life and work, and exerts a subtle influence on the future development of human beings. McKinsey's report pointed out that the big data will become the future innovation, competitiveness and productivity of key basis [2], and WeChat big data function by information gathering certification, in the community construction work cannot be ignored also play a role, its role in coordination in the process of community prevention and control of the outbreak and epidemic prevention work show adequately.

II. LEARNING ABOUT NOVEL CORONAVIRUS TRANSMISSION METHODS

2.1 Optimizing Community Security Management

In the community public security prevention and control, often with poor information sharing, technical conditions don't match between the disadvantages, such as WeChat application popularization, the certification by user data collection and big data technology provides data analysis, to overcome the police use of mobile terminals in the process of probing the case analysis of community information timely resolution, crime criminal record, such as information sharing between the people and technical problems.

Through the community Wechat platform, law popularization agencies use big data visualization to turn the data into visible ICONS and videos to show the harm and consequences caused by illegal and criminal behaviors, so that the masses can understand laws and regulations more intuitively, clearly and clearly, and act in accordance with the law on this basis. Let the common people have a more convenient way to carry out legal consultation, enhance the masses to know the law, understand the law, the popularity and practicality of usage. Use legal means to safeguard their own rights and interests while being vigilant against illegal and criminal acts. Through the online legal education propaganda, greatly improve the efficiency of legal work, promote the construction of the rule of law society legal work of modernization and networking. Zhou Xinjie et al. pointed out that the Internet and the latest big data technology should be used to realize the two-way interactive application of data from cloud to terminal, so as to break through spatio-temporal regions, reduce the difficulty of community work, make the prevention and control more accurate, governance operation more efficient, serve the masses more effectively, and "improve the quality and efficiency of governance efficiency" [3].

Similarly, the law enforcement department issued the wanted list through the community Wechat platform to quickly and conveniently convey effective information to the community residents, so as to achieve timely feedback from the masses and timely implementation of the law. For the carriers of the novel coronavirus, wearable devices developed regularly send relevant data to the data center to achieve online monitoring. In the actual police practice, with the guidance of informatization and data, "the integration of online control and offline control" [4] is implemented to realize real-time and dynamic control of law enforcement and services, and actively carry out online investigation, online collusion, online verification and online pursuit, so as to timely control the situation.

Forest Chemicals Review
www.forestchemicalsreview.com
ISSN: 1520-0191
July-August 2022 Page No. 1863-1869
Article History: Received: 02 April 2022, Revised: 15 April 2022, Accepted: 24 April 2022, Publication: 04 May 2022

2.2 Accreting Investigation of Community Fire Hazards

Community is a community of social life formed by people in a certain range. Fire accidents cause huge losses, and it is difficult to perfect the investigation of fire hazards. With the wings of big data technology, market forces and social forces are coordinated to form a more effective integration on the grid platform from the perspective of technology, which is expected to turn management mode by the "grid management" to "grid autonomy" [5], for the public affairs of each grid are blocked, conduit blowout, etc., in the grid individuals can report in the first place, and to provide accurate positioning, the executive power grid or homemade members can use the mobile terminal on the repair scheme for fault vote online discussion and corresponding real time, In this way, faults can be handled quickly. The continuous implementation of this work helps solve the housing problems of community residents in an efficient and timely manner during the epidemic period, which is conducive to the further development of community isolation.

III. DISCUSSION ON THE ROLE OF WECHAT BIG DATA IN COMMUNITY EPIDEMIC PREVENTION AND CONTROL

3.1 Public Opinion Weather Vane in Public Emergencies

Since the end of 2019, COVID-19 has ravaged the world with its high infectivity and long incubation period, and the number of patients has increased rapidly for some time. China took the lead in making positive response measures. Community epidemic prevention work was carried out closely, and the people actively responded to the decisions of the Party and the government: home quarantine, closed communities, closed rural roads, wearing masks outside. As the Party and the people work together in the face of the novel Coronavirus outbreak, China's prevention and control work is progressing in an orderly manner, and we have achieved one periodical victory after another with amazing speed and achievements. At the same time, we have provided working experience for other countries, which is of great significance. Fig 1 and Fig 2 showed that the epidemic situation in China and the United States had different trends [6]. China gradually increased to the peak in a short period of time and then leveled off, while the number of confirmed cases in the United States showed a linear growth trend over time. However, there is also a downward trend in the growth rate. The epidemic data of the two countries are accompanied by certain characteristics over time, and the continuity of time is good. The data before and 2020-05-26 were selected as the training set, and the data after 2020-05-27 were selected as the test set. The time dimension of the test set was 2020-05-27 to 2020-06-02, and the length was 7 days, then exponential smoothing model (Holt Winter) was used to learn the training set. The test set is then used for evaluation. It is not difficult to find the rampant situation of the epidemic through the assessment, which requires the country to pay high attention to timely control of the epidemic, otherwise people's lives will not be guaranteed. The Chinese leaders pointed out during their survey of COVID-19 prevention and control work in Beijing in February 2020 that communities are the first line of joint prevention and control, and the most effective line of defense against imported COVID-19 cases and the spread of COVID-19 in China. By defending the community line, we can effectively cut off the channels for the spread of the epidemic.

Forest Chemicals Review
www.forestchemicalsreview.com
ISSN: 1520-0191
July-August 2022 Page No. 1863-1869
Article History: Received: 02 April 2022, Revised: 15 April 2022, Accepted: 24 April 2022, Publication: 04 May 2022

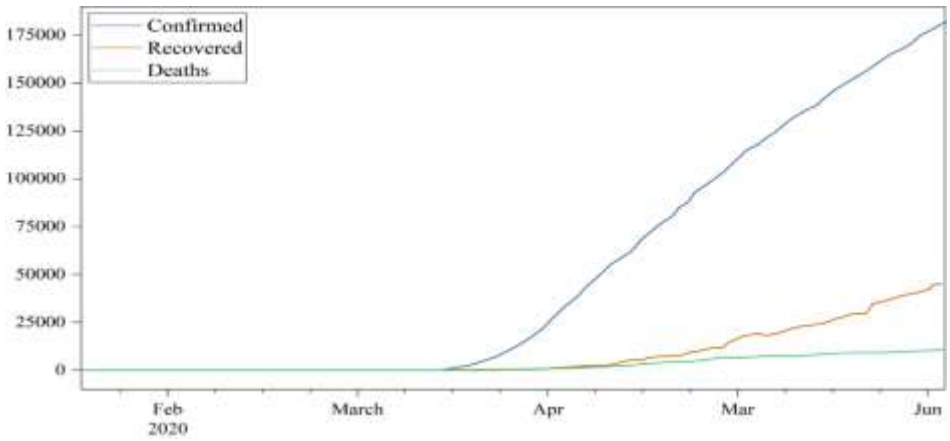

Fig 1: trends in Epidemic data from China and the United States (February-June 2020)

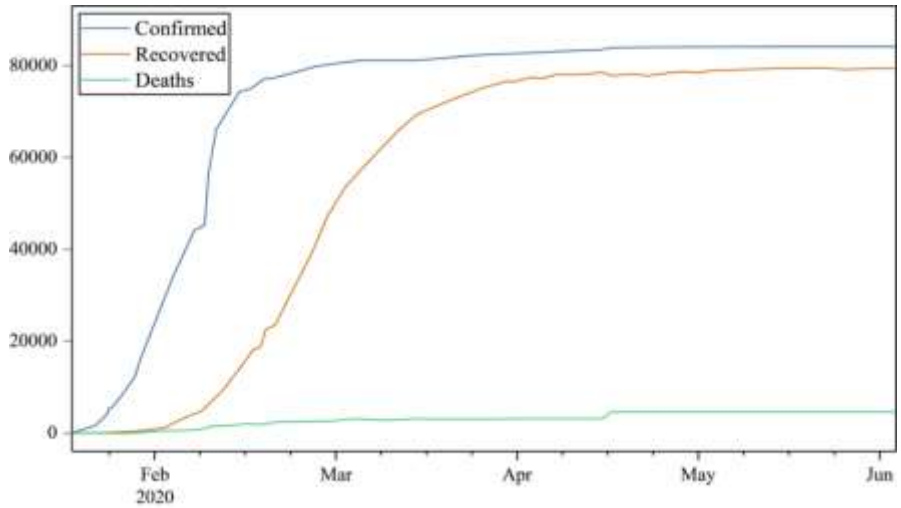

Fig 2: trends in Epidemic data from China and the United States (February-June 2020)

At the same time, after every public health emergency, a large number of rumors and one-sided information flood into the field of public opinion, causing tension, panic, anger and other emotions to varying degrees, which can be called the "secondary disaster" of public health emergency [7]. The public uses the Internet to receive all kinds of information through various channels, and some unofficial information makes it difficult for the masses to distinguish between true and false. Rumor mongers take the opportunity to release rumors during special periods, causing social panic. WeChat function of big data in the outbreak is the official media channel, maximize the positive energy release in the emergency management, community WeChat official news platform, to develop epidemic situation accurately and quickly across to the crowd, positive feedback the masses at the same time, the social rumor, false news expose, rumours, breaking a communal work [8], Playing its role in pacifying people and maintaining social stability. Therefore, the Wechat platform serves as a good barometer of public opinion on the epidemic.

Forest Chemicals Review
www.forestchemicalsreview.com
ISSN: 1520-0191
July-August 2022 Page No. 1863-1869
Article History: Received: 02 April 2022, Revised: 15 April 2022, Accepted: 24 April 2022, Publication: 04 May 2022

3.2 Big Data to Collect Community Epidemic Prevention Information

The state leader pointed out that the whole Party should have greater confidence in its path, theory, system and culture. After the outbreak of COVID-19, the Party and the government quickly made corresponding decisions and the state implemented intervention and guidance, which largely limited the spread of the epidemic. Under the correct leadership of the country's leaders, China successfully passed the peak of the epidemic on March 12, compared with the increasingly severe spread of the epidemic in the world. As Chinese leader has pointed out, China's response to the epidemic fully demonstrates the remarkable advantages of the leadership of the Party and the socialist system.

In community-level prevention and control work, community front-line managers and volunteers use big data technology to collect statistics on residents' health conditions. Epidemic prevention personnel in all provinces and cities use temperature guns to measure residents in residential areas and record the data on the information management platform to realize real-time tracking of the epidemic situation. From the community level to the front line of epidemic prevention, Wechat's big data function spreads the development of the epidemic by verifying residents' identities and certifying their health. Combined with media reports, the battle against epidemic prevention has become transparent and digital. Every day, new patients, close contacts and suspected cases can be reported in a timely manner. People can obtain real-time information on the platform, and CDC departments can accurately judge the trend of the epidemic on the platform. Governments at all levels rely on big data to control medical resources, and big data technology has played an irreplaceable role in epidemic prevention.

Compared with the global epidemic situation, many political figures and military leaders have been infected with novel coronavirus, causing worldwide panic. China, on the other hand, took timely control after the outbreak, using big data to track the travel of patients and suspected patients during the Spring Festival travel rush and rework periods, and implemented epidemic prevention measures to grass-roots levels to minimize the probability of cross-infection among people in contact. In contrast to the response policy of some Western countries that do not disclose or test, China has made full use of the supply of testing reagents and reimbursement of patient treatment costs, and fully leveraged the mobilization capacity of grassroots organizations from horizontal to edge and vertical to bottom, so as to bring grid management into play and build the people's defense line for epidemic prevention and control. This fully demonstrates that China has always adhered to the work line of "people-centered" and adhering to the Party's mass line, promoted the downshifting of the center of gravity, and played the important role of the grass-roots level.

3.3 Targeted Prevention and Control Closely Follow the Epidemic Situation

With the effective control of the epidemic in China, the prevention and control measures are gradually shifting from closed control to sophisticated intelligent control. Community residents in and out as an important place, for the implementation of the epidemic prevention and control policy, utilizing the means such as yard through adopting WeChat two-dimensional code way by red, yellow, green, dynamic analysis,

Forest Chemicals Review
www.forestchemicalsreview.com
ISSN: 1520-0191
July-August 2022 Page No. 1863-1869
Article History: Received: 02 April 2022, Revised: 15 April 2022, Accepted: 24 April 2022, Publication: 04 May 2022

grasp the residents' health status, is not only beneficial to the virus infection inside the community, but also to the residents of isolation has certain risk, form a closed-loop real-time work. At the same time, big data visualization technology can also be used to accurately access the information of confirmed cases in communities with more intuitive methods, which is more convenient for community prevention and control work. The green, yellow and red colors of the health code can accurately identify the physical status of residents, control the epidemic situation in real time, prevent the spread of the epidemic and promote the smooth development of community work. As Described by Tong Yun, "the health code is used to depict the action path, and the prevention and control strategy can be adjusted in time according to the change of the prevention and control situation, so as to ensure the balance between production and epidemic prevention, orderly promote the resumption of work and production, and effectively promote the normalization of people's production and life" [9].

IV. CONCLUSION

First, it is conducive to building smart communities. Based on commercial purposes, community construction uses big data to collect, process and analyze the needs of community residents to establish a tripartite communication channel among residents, property management and surrounding businesses, so as to build the community market into a smart market that changes supply and demand according to data. With the development of smart market, the "smart service industry" based on community residents is derived. After the statistics and analysis of the consumption data of customers, merchants have a deep understanding of the potential needs of customers, and they will prepare for the service consumption of customers as soon as they enter the store. At the same time, community hospitals rely on big data to collect and analyze residents' health status, rationally allocate medical resources and reduce the cost of practicing medicine in community hospitals. In light of this outbreak, some patients were infected in outpatients of hospitals with a large number of people. Due to inadequate protective measures, patients and suspected patients flocked to outpatients of hospitals, greatly reducing the risk of contracting the novel coronavirus. Using big data to count the number of patients and suspected cases, community hospitals have been able to share the medical burden of third-class a hospital in epidemic prevention and control. By referring to the big data model, community hospitals matching the size of the community are established. By optimizing the medical configuration, the masses are guided to "stay in the community for minor diseases and go to the hospital for serious diseases", so as to provide medical security for the smart community.

Second, it will help modernize China's governance system and capacity. We know that the construction of a harmonious society is our party to comply with the change of history development, to promote the great cause of socialism with Chinese characteristics to make a major strategic move, is to meet people's growing material and cultural needs, consolidate the social foundation of the party in power, to realize the party's ruling history tasks and the inevitable requirement of comprehensive construction well-off society goal. As the cell of the city, community is an important part of the society and the basic unit of the whole society. The harmony of community is also the premise of social stability, and plays an important fundamental role in the construction of a harmonious society. Wechat big data has provided strong support for China's epidemic prevention and control, and the combination of this technology and community work

Forest Chemicals Review
www.forestchemicalsreview.com
ISSN: 1520-0191
July-August 2022 Page No. 1863-1869
Article History: Received: 02 April 2022, Revised: 15 April 2022, Accepted: 24 April 2022, Publication: 04 May 2022

has played a huge role. It is an inevitable choice in the era of big data to collect data extensively and process data comprehensively to realize technological innovation, management innovation and service mode innovation of community service.

ACKNOWLEDGMENTS

This paper is the stage achievement of the project supported by National Social Science Foundation "The Integration of Chinese Dreams into the Whole Process of Ideological and Political Education for Tibetan Students in Western Universities" (14XKS035) and Xi'an University of Science and Technology Project "Research on the Strategy of Xi'an University of Science and Technology 'First-class Undergraduate' in the Context of 'Four Regressions' in Higher Education" (GJY-2019-YB-10).

REFERENCES

[1] Wu Hequan. Big data to help epidemic prevention and control. China Information Weekly, 2020-03-09 (007).

[2] Wu Hequan. Opportunities and Challenges in the Era of Big data. China Economy and Trade, 2013 (06): 16-19.

[3] Zhou Xinjie, Ma Jianwen. Characteristics of social governance organizational structure from the perspective of public security and big data. Journal of Wuhan University of Technology (social science), 2020, 33 (1): 27.

[4] Wang Qiang. Research on the application of big data in social security prevention and control. Journal of Guangxi Police College, 2016, 29 (2): 81.

[5] Yang An, Yan Fengyun, MIAO Hong. The application of big data in social governance innovation. Observation and Thinking, 2015 (8): 61.

[6] Big data Analysis: Epidemic analysis. https://www.cnblogs.com/Sycblog/p/13235703.html.

[7] Chan Xuegang. The reduction of emergent public health event emergency management. HTTP: //http://sd.people.com.cn/GB/n2/2020/0309/c373025-33860693.html.

[8] 80% in the first half of Shanghai Internet rumors for outbreak, WeChat friends into a tale hard-hit. HTTP: //https://tech.sina.com.cn/roll/2020-09-02/doc-iivhuipp2124031.shtml.

[9] Tong Yun. Using big data to promote precise epidemic prevention and control. Learning Times, 2020-03-20 (003).