

# A Study on the Safety Guidelines of Public Health Examination Activities under the background of New Coronavirus Epidemic Prevention

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**Abstract:** The epidemic situation of new coronavirus urges us to think about how to do well in public health and epidemic prevention. This paper reviews the development history of public health as a discipline for more than one hundred years, combines the practice of anti-epidemic and draws lessons from the development history and experience of public health in China. People are the main body of public health and epidemic prevention. Only by integrating people's awareness, ability and practice of public health and epidemic prevention, can we prevent and reduce the epidemic fundamentally. Therefore, it is necessary to construct multiple "communities" in the field of public health and epidemic prevention under the guidance of "community" theory. It is an important content to complete physical examination regularly. Early detection of the disease, to instruct patients to timely and effective treatment, which can make the health no longer deteriorate. Therefore, regular physical examination plays an important role in improving people's physical quality.

**Keywords:** *New Coronavirus, Epidemic Prevention, Public Safety, Health, Physical Examination, Safety Guidelines*

## I. INTRODUCTION

In China, the population density is high and the mobility is large. When encountering infectious and pathogenic virus, it is easy to cause large-scale transmission of virus. If the epidemic situation is not effectively controlled, it will seriously threaten the health and life safety of the people. This has a significant impact on economic development, social stability and foreign exchanges. At present, the prevention and treatment of all kinds of new viral infectious diseases mainly include vaccine immunization, drug prevention and control, disinfection and epidemic prevention. Vaccine immunization and drug treatment can effectively prevent and control infectious diseases, but vaccine immunization has a long development cycle and poor timeliness. Drug treatment mainly depends on the screening of antibiotics and existing drugs, with low timeliness. Disinfection and epidemic prevention is to disinfect the human body surface and living environment with disinfectants, which can effectively kill harmful microorganisms and cut off their propagation and transmission channels, so as to achieve the effect of preventing viral diseases. Standard and thorough disinfection is an effective means to prevent and control viral diseases. People are more and more aware of the importance of disinfection. Disinfection products are widely used in many fields such as daily life, public health, food safety, medicine and health.

The outbreak of novel coronavirus infection since December 2019 has become a severe public health crisis. Novel coronavirus pneumonia has become the most urgent task in China. The government has invested a lot of manpower and resources to control the epidemic. According to the basic theory

of infectious disease control, the most effective measures are to control the source of infection, cut off the route of transmission and protect the susceptible population. At present, due to the lack of effective vaccines and preventive drugs, it is an urgent task to control the source of infection and cut off the route of transmission. As far as the source of infection is concerned, people in close contact with patients may become new patients or new sources of infection, so it is very important to isolate and observe these people. In order to ensure the effect of isolation, the community needs to strictly control the isolated personnel. At the same time, it is also necessary to know the dynamics of the quarantined personnel and whether there is infection.

Strengthening the safety work of college students is the need to ensure their normal study and life. The code of conduct for college students and the regulations on the management of college students reflect the party's and the state's attention to the ideological and political work of college students and the daily management of students. To strengthen the safety management of college students, we should take the spirit of these documents as the guidance, so that college students can consciously establish the awareness of safety prevention and consciously abide by the law. To strengthen the safety management of college students, to make the majority of students to improve their vigilance, master the necessary safety knowledge, and strengthen the safety management are the basic needs to ensure the normal learning and life of college students.

## II. THE PROPOSED METHODOLOGY

**Epidemic Prevention in the Context of New Coronavirus.** The novel coronavirus pneumonia is the most serious public health emergency in China since its establishment. The outbreak of the epidemic broke the normal order of the society, made the society transition from the normal to the abnormal, and also made people quickly build a special period of life community to fight the epidemic together. In terms of the individual level of the community, we need to deal with a series of dialectical relations between individual rights and interests and the overall order of the community, such as individual life safety and the interests of others, individual life requirements and the balance of social relations, individual rights and freedom, etc. Individuals actively spread positive energy while doing a good job of protection, not listening to rumors and not spreading rumors, and play their own role in the fight against the epidemic.

After dissolving in water, potassium bisulfate composite powder disinfectant reacts with chloride ion and organic acid to form hypochlorite and oxygen free radical, which can play the role of chlorine containing disinfectant and peroxide disinfectant at the same time. Among them, hypochlorite has strong oxidability. After contacting the new coronavirus, it will first oxidize the envelope protein to denature it, at the same time,

it will damage the protein shell and lose the protein crosslinking effect, thus further destroying the enzyme system and genetic genes, and making it inactivated. Oxygen free gene is a powerful oxidant. After contacting the virus, it can be oxidized and damaged by removing the electrons from the envelope protein of the virus. It can also attack the base and sugar phosphate skeleton of nucleotide, thus destroying the biological structure and function of the virus.

The current focus of remote patient monitoring research is to improve patient efficacy and wireless network sensors, as well as the out of band authentication scheme using Internet of things devices. Using IOT devices, including WBANs and geofencing, can reduce the number of monitors. Both the epidemic prevention center and the quarantine can see their own data in real time, and once the threshold system is exceeded, people can respond to it. For example, when the isolators have abnormal physical characteristics, they can be transferred and treated in time to save their lives. In addition, geofencing technology will draw the isolation area in advance. When the quarantiner is detected to leave the isolation area, the monitoring personnel can immediately know that it will reduce the time taken to return the quarantiner to the isolation area and prevent the further spread of the epidemic. In addition, the use of the system avoids the behavior of sending a large number of on-site personnel to check the isolators, reduces the consumption of manpower, and effectively avoids cross infection.

The research proves that the combination of Internet of things and blockchain in the medical field is proposed by using proof of concept. In this system, alliance chain is used, as a kind of blockchain, which integrates many advantages of blockchain. For example, the distributed architecture makes the overall stability of the system have obvious advantages over the traditional central database. The detection system will not crash the whole system due to the failure of the central node, resulting in a large number of data and resource losses. In addition, another advantage of blockchain is that it can't be tampered. All nodes in the system keep a complete record. It's not realistic for anyone to tamper with data. Compared with the public chain, the alliance chain has a high degree of privacy. Only authorized users in the alliance chain can access the blockchain information or verify new blocks. Each quarantiner has an anonymous account, which can only be viewed by individuals. It helps to improve the transparency of the quarantiner while protecting privacy. In addition, in the alliance chain, the trusted specified nodes will be selected in advance to verify the newly generated events and package them into blocks, so the process of generating new blocks will be more efficient and safer. In addition, smart contracts on the blockchain are automatically executed according to predefined conditional triggers.

**Community in Epidemic Medical Treatment and Treatment.** The community of doctor-patient destiny in epidemic medical treatment and treatment is the core of epidemic response. The speed and quality of its construction is directly related to patients' life safety and health, and also determines the overall process of epidemic response. The novel coronavirus has a high speed of transmission and high infection rate. However, after the outbreak, the state organized 29 provinces, regions and cities, Xinjiang production and Construction Corps and the army to dispatch more than 330 medical teams and 41600 medical personnel to help Wuhan and Hubei, forming the most beautiful "rebel". Many medical staff are infected and even pay the cost of their lives. They protect the lives of patients with their own lives. The life and death of doctors and patients are connected with each other, forming a community of common destiny. Such a community of shared

future of doctors and patients adds a tragic color and promotes a lofty spiritual realm.

In the face of an outbreak, it is difficult for all kinds of response strategies and materials to be fully in place for a while. In the absence of a clear understanding of the nature of the virus and how to deal with it effectively, the service of medical staff may be inadequate, which needs to be understood by patients. At the same time, the virus spreads quickly, causes unknown for a while, and has many uncertainties. Patients will have panic, anxiety and other negative psychology. Therefore, medical staff also need to understand and support and do a good job in medical treatment and appeasement. At the same time, the spread of the epidemic will increase the number of infected people and the workload of medical staff, which increases the difficulty of building a community of shared future between doctors and patients during the epidemic. Only in this way, it highlights the importance of mutual tolerance and cooperation between doctors and patients on the basis of understanding and support, and to join hands in fighting the epidemic to form a community of shared future for doctors and patients. In the process of fighting against the new crown epidemic, there emerged many models of the community of shared future of doctors and patients, which provided many inspirations and references for building a more harmonious community of shared future of doctors and patients after the epidemic.

Fundamentally, to do a good job of public health and epidemic prevention, we need to put people in a reasonable position in the nature, build a rational relationship between people and other life bodies in the nature, and use human wisdom to make the nature more harmonious and beautiful. "Man lives by nature. That is to say, nature is the human body with which human beings must be in a continuous interactive process in order not to die. Nature is not the opposite of man. Man and nature are one. Man has the responsibility and obligation to protect nature. "Animals are only constructed according to the scale and needs of the species to which they belong, while people know how to produce according to the scale of any species and how to apply the inherent scale to objects everywhere. Therefore, man is also constructed according to the law of beauty.

Bruce elwald, senior adviser to the director general of the World Health Organization, spoke highly of the prevention and control of the epidemic situation of our government and people, and won precious time for countries to take active prevention and control measures. He called on novel coronavirus pneumonia to strengthen the sharing of information on epidemic situation and unite to tackle the challenge of new crown pneumonia. China's anti epidemic shows that it is a responsible big country, and it has promoted the historical process of building a "community with a shared future for mankind" by fighting against the epidemic together with the people of all countries.

**Safety Guidelines for Physical Examination Activities.** At present, the medical conditions and technology of many university affiliated hospitals are limited, and students who have major diseases still need to go to see a doctor outside the University. Due to the continuous progress of medical reform in China and the continuous changes in the medical market, college students are lack of reliable system guarantee when unexpected casualties, serious diseases and medical accidents occur in the current medical system reform. In order to strengthen the medical safety of college students, we should strengthen the work on the physical examination of freshmen, the annual physical examination of students, the regular

reexamination of infectious disease patients and the prevention of infectious diseases.

Regular physical examination is the main way to prevent diseases in advance. The use of physical examination can detect abnormal phenomena in the examination of sight, touch, percussion and hearing. In the routine examination, we can find the hidden cause of disease and the information of the change of health. Enhance the understanding of their own health and reduce the impact of unhealthy life style on themselves. Adjust the self-regulation system to ensure the safety of the internal and external environment of the human body, and achieve the goal of "early detection, early prevention, early judgment and early treatment". However, it is necessary to have an effective understanding of the physical examination report. The physical examination report can only indicate the recent physical condition, not that there will be no problems later. Therefore, we need to complete the physical examination on time every year. If the examination results are abnormal, we should actively treat according to the doctor's opinions, which is the main significance of regular physical examination.

If some diseases have already appeared, they are generally in the middle and late stage, causing great harm to the human body and difficult to treat. In fact, many diseases can not be easily detected in the early stage. For example, most people with high blood pressure know that they have high blood pressure only during physical examination. Recessive coronary heart disease, tumor and other diseases are not usually felt, but when you feel something wrong, it may be in the middle and late stage. Irregular examination can check whether there is any clinical phenomenon or dangerous disease, such as three high and tumor, etc., which can avoid the untimely treatment and increase the economic pressure of patients. Quality of life is also an important index for the evaluation of treatment results and disease degree. The use of physical examination can detect the disease without symptoms and obvious symptoms in advance, and then clear the extent of the disease and timely treatment. Early detection and timely treatment can really prevent the disease and achieve the best treatment results, which greatly improves the recovery rate. Moreover, for some diseases, improving treatment can greatly reduce the time, effort and economic pressure in treatment, and also truly optimize the quality of life of patients. Using the above research, we can see that the focus of health theory is to change passive treatment into active treatment, from serious disease treatment to early diagnosis and timely treatment. As people are more and more aware of the importance of health, so many people began to take the initiative to carry out physical examination, which means that people began to understand the important role of physical examination. However, the total number of people is still less than 1 / 3 of the total number of physical examination. Therefore, medical workers must strengthen the publicity, and then improve people's understanding of physical examination, so that the theory of physical examination is well known. Only in this way can people actively and regularly carry out physical examination, so as to optimize people's health and quality of life.

The school should establish a safety system based on dormitory, class, linkage of all functional departments and participation of students' parents, so as to overcome the existing incongruity in the safety management system. Colleges and universities should include safety management as an important part of strengthening the construction of the party, strengthening administrative efficiency, establishing post functions, improving the quality of education, and improving the conditions of software and hardware in the evaluation of the overall construction.

## CONCLUSION

The epidemic situation of new coronavirus urges us to think about how to do well in public health and epidemic prevention. Individuals actively spread positive energy while doing a good job of protection, not listening to rumors and not spreading rumors, and play their own role in the fight against the epidemic. According to the disinfection mechanism of potassium persulfate composite powder disinfectant and the characteristics of new coronavirus, it can be used as a new generation of disinfectant for the prevention and control of new coronavirus, and it can be used in customs import and export epidemic prevention and pretreatment of medical institutions.

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