

Design of Computer-Assisted Models for Preventive Medicine Perspective

Jun Luo¹, Yi Qin¹, Xue Zhang², Liangyu Li³

1. Saharov Institute of ecology, national university of Belarus, Minsk 220030, Belarus.

2. Singapore Management University School of Economics, 178903, Singapore.

3. Belarusian National University Business School, Minsk 220030, Belarus.

Abstract: The simulation exercise of building accidents is conducive to improving the human survival rate after urban building accidents. This is the content of preventive medicine. The remote sensing technology of city map can monitor the building structure and ecological conditions of specific cities, which can be used to build a rapid response model for emergency medicine departments. Therefore, the economic construction can be enhanced to improve the survival rate of the people affected by the disaster, which is beneficial to urban construction. The research team analyzes and reports on the specific model development of computer technology, the computer intelligent simulation of the program setting for specific populations, and the rapid response of emergency medicine as the application object for the relevant workflow analysis, and enhance the perfection of preventive medicine system from the perspective of intelligent economic development.

Keywords: Simulation Exercise; Building Accidents; Computer Technology

1. Studying measure

For example, the wall cracks of buildings occur, but they are often not found due to various reasons. We should pay attention to the research of multi-directional detail prediction during the simulation of construction accidents. (1) During the construction accident, a large number of victims are often injured. Therefore, we should try to use computer simulation methods to conduct avoidance training in the research of construction accident simulation, and combine medical neuroscience and psychology to simulate the overall perception of simulated accidents. This can really improve the resilience of victims, but the exploration of hidden neurons in the brain is more complex, not yet integrated into software. At present, the computer technology used is more conducive to popularization. (2) Urban remote sensing technology has been widely used all over the world. Remote sensing technology is based on the principle of electromagnetic wave, which is used to collect, process and finally image the radiated electromagnetic wave. On the basis of aerospace technology, countries in specific regions can use remote sensing technology to conduct large-scale architectural scanning, which can eliminate ecological hazards. Moreover, if the remote sensing based medical early warning technology is applied to emergency medicine to form a new model, it will have less response time than traditional medical first aid, which is valuable in emergency medicine. Moreover, based on the widely used remote sensing technology, it carries out a special signal transmission system for special tasks of special natural disasters and urban disasters in emergency medicine, and aims at the location of specific accidents, establish an expert team near a specific area that can reach the site immediately. After the integration of disciplines, the specific emergency framework of emergency medicine after the disaster will complete more rescue tasks in the precious rescue time. For example, after the return of radiation, remote sensing technology can integrate the image information and send it to architects, who use this technology to judge the internal structure and physical and mechanical solutions of the affected buildings. Rescue can be carried out, which can save the lives of more patients who did not die on the spot but died of excessive blood loss due to long waiting time. The author makes a systematic analysis of this concept based on the development of various disciplines. Firstly, building accident simulation technology. The building accident simulation technology should pay more attention to the research on the prevention work integrated with multimedia,

and strengthen the construction of the exercise system related to cognitive accident situations and avoidance methods based on brain neuroscience in accidents. In architecture, the occurrence of building accidents is often accompanied by complex movements under the gravity of high-altitude falling. In the process of falling, we should pay more attention to the stress prevention measures for the victims. Usually, based on gravity, when the victims fall on the flat ground or complex structural objects in buildings, their lungs will be damaged. The respiration of the lungs depends on the alveoli. However, after the alveoli are severely compressed, the blood oxygen content will rapidly decline, the blood volume will decline, etc., which eventually leads to cardiac arrest and death. It can also cause spleen rupture, liver rupture, gallbladder rupture and other emergencies. However, if the affected person can find a reliable mechanical structure to avoid damage to their main organs before landing, they can often save their lives. In the daily work of the emergency department, it is found that a large number of patients' elbows or wrists touch the ground, which often leads to open fractures. Therefore, in complex building disasters, we must carry out multimedia integration and simulation training based on brain neurology and psychology. Such simulation training should also carry out stress response training simulation for people's cognition of the surrounding environment, such as avoidance of object strikes in buildings, mechanical structure judgment after building collapse, mechanical injury and attention cultivation of high school falling objects. In the direction of multimedia, we should simulate and demonstrate for the masses, such as the judgment of various dangerous buildings. Only in this way can we take precautions. Taking Changsha as an example, taking Changsha Medical College as the target, and Changsha Medical College students as the specific population, the school's educational affairs office should carry out the training of relevant teachers, implement the responsibility system of one teacher for each class. In combination with the reward and punishment system and assessment and evaluation, Marx's ideological and political instructors must follow up the freshmen in real time during their enrollment, and teachers should carry out the end elimination system through teaching and supervision scoring. In combination with economics and psychology, the work task of strictly governing the Party and safety management units, especially the evacuation practice of accident simulation, is promoted, which is the basis for the rapid response and rescue work of the emergency medical department, and more importantly, school local cooperation should be carried out, and emergency science experts should be invited to the local top hospitals for the training of all teachers and students of relevant knowledge.

The remote sensing platform of urban remote sensing technology is connected with the establishment of the high-speed information receiving system of the local emergency center and the high-speed interconnection of the intelligent communication chain of the architectural research institute, the fire department and the public security department:

China is a socialist country, Changsha Medical College is an undergraduate college under the leadership of the Communist Party of China. According to the analysis of the region, Hunan University of China, Central South University of China, Changsha University of Technology is located around Changsha Medical College. Changsha also has a large number of other engineering design and scientific research units. In emergency medicine, rapid judgment of disasters and accidents is one of the bases for the development of emergency medicine. Only through the cooperation of experts from all disciplines can the people be quickly rescued. The government can consider establishing an Internet for experts from multiple regions to quickly gather in disaster stricken areas by taking family address as the unit. Based on the current situation, we can find that after receiving signals from multiple rescue centers, each unit will quickly arrive at the scene, but experts in related fields cannot gather quickly. In a socialist country, the lives of the people are invaluable, so it is particularly important to set up expert groups for emergency rescue in various regions, which can clear the way for the implementation and play of emergency medicine. It is also the basis for emergency medical departments to carry out pre-hospital first aid. At the same time, the urban detection platform based on remote sensing technology should integrate relevant data at the first time to show the complete situation of building accidents to the rescue unit. In addition, the remote sensing platform should be set with a specific Internet connection for perceivable dangerous buildings, including the first aid center, building design center, fire safety center, public security information center, and civil affairs department contact center. This is the way that the emergency medical department can tell to intervene in the accident. In most cases, the emergency medical center cannot rescue the personnel immediately after arriving at the construction accident site. Therefore, the fire department needs to quickly determine the degree of safety, and the architect needs to analyze the possible dangers in various buildings, which often requires the organizer to spend a lot of time. The purpose of setting up this mechanism is to reduce the preparation time

for the work of the whole organization. After the relevant local experts arrive at the site quickly, they can specify an efficient scheme based on the site conditions. The application of remote sensing technology here is not only to prevent the occurrence of high-risk building accidents, but also to assist all departments in providing information, providing valuable rescue time for emergency medical departments.

2. Optimization of methods and targeted strategies for carrying out emergency rescue tasks in colleges and universities

At present, emergency rescue work in some cities in China is as follows. Taking Chifeng City, Inner Mongolia, as an example, in 2018, after receiving the call for help, the emergency rescue center will conduct selective broadcasting for hospitals in a full range as an API, rather than a full range of broadcasting. The principle of emergency high-speed response is: In addition, Chifeng Emergency Center has medical cooperation with Chifeng Hospital, and many other hospitals are often unable to participate in the work of Chifeng Hospital's selection of line configuration. Taking this as an example, we tried to conduct a simulation study on the telephone calls made by the masses, provided that the number of people could not be determined, and the result was that only one unit would be likely to put into rescue at the first time. Based on the dense population distribution of colleges and universities in China, we tried to establish a more optimized work arrangement for emergency medical departments. In order to ensure the safety of people in colleges and universities, after the collective broadcast of extraordinary tasks was launched in a full range. All hospitals reserve necessary medical reserves for other emergency work needs, and spare no effort to collectively participate in rescue work at the first time. It is worth mentioning that most hospitals throughout the country do not have the ability to fight against the huge task alone. In combination with the actual work of emergency rescue, the author found that often a tertiary hospital does not have more than 5 emergency vehicles and relevant staff that can be called at the same time, so the optimization of the broadcasting mechanism can provide sufficient medical resources to patients. Through investigation, we found that there are a large number of medical institutions in Changsha, Hunan Province. We tried to use the collective broadcast mode in network simulation to broadcast all units with emergency medical qualifications within the scope. Based on the building accident of colleges and universities, regardless of whether the number of people can be identified immediately, all emergency medical centers in the urban area should be broadcast at the first time. All units should move to the destination at a high speed at the same time. The medical resource delivery scheme higher than the requirements of the rescue site should be set up, because the emergency medical department may have special working conditions, such as rollover, getting lost, personnel injury, etc. In addition, the emergency medical center should quickly broadcast the remote sensing monitoring system to the whole unit, and the competent department of each rescue unit should also release the remote sensing signal at the same time. This method is more suitable for the emergency rescue task of long-distance and high-speed attacks. Taking Changsha Medical College as an example, if there is only one emergency department, and the number of victims is 30-50, which has exceeded the overall emergency medicine related talent and material reserve of five tertiary hospitals, if the local hospitals have poor cooperation ability with each other, or only one hospital carries out rescue tasks according to the local work process, the result is that the distribution of medical resources is insufficient, causing significant losses to the health and safety of the people. The optimization of the mechanism is conducive to avoiding this result. The optimization of emergency task allocation is an important research object of catastrophic natural disasters and disasters, and we must conduct in-depth research.

3. Conclusion

Based on urban building accident simulation and map remote sensing technology, we can optimize the rapid response model of emergency medicine in cities, which is low in cost, fast in speed, and more suitable for the architecture related accidents with the population density characteristics of colleges and universities. Finally, the author believes that the contact mechanism of various institutions of emergency medicine is to be optimized in many cities. If there is a natural disaster near Changsha Medical College, Changsha municipal government departments should give strong leadership to the local medical institutions and arrange the scientific tasks of the emergency medical center. Finally, based on the emergency medical work

process of Chifeng City and Changsha City, the author believes that more simulation drills for natural disasters or major accidents should be carried out, which should include the rapid organization and mobilization of relevant experts, the high-speed support of medical departments, and the simulation drills of higher education institutions.

References

- [1] Li J, Pan L, Research on GA-BP neural network accident prediction model based on multi factors for construction safety [J], Construction Science and Technology, 2021 (5): 84-90.
- [2] Wang XF, Shen FM, Nonlinear combined prediction of construction accidents based on BP neural network [J], Journal of Fuzhou University (Natural Science Edition), 2015,43 (1): 94-99.
- [3] Hao HJ, Shen SK, Li W, The application of grey system theory in the prediction of construction safety accidents in Henan Province [J], Value Engineering, 2020, 39 (26): 85-86.