

The Construction and Practical Pathways of Medical Education Case Library: Integration Based on Representative Cases

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Abstract: Based on the core value foundation of education, this paper systematically collected and integrated four typical cases of poliomyelitis vaccine research and development, disaster medicine exploration, elderly care development and public health system construction, and discussed the construction logic and practice path of medical education case library. The research focuses on the medical value education elements in the case, and extracts three common cores: the value concept of “people first and life first”, the scientific spirit of “seeking truth from facts and respecting the law”, and the national feelings and responsibility of “success does not have to be in me, success must have me”. The establishment of the case library adheres to the principles of the organic integration of professionalism and educational value, the coordination between historical perspectives and realistic requirements, and the unity of individual spirit and national strategy. The scattered practical experience system is integrated into educational resources with both professional depth and value guidance. The purpose is to strengthen the social responsibility and national feelings of medical students, refine professional spirit and humanistic care, cultivate scientific literacy and innovation consciousness, strengthen institutional self-confidence and development identity, and provide strong support for the cultivation of high-quality medical talents in the new era with both ability and political integrity and all-round development.

Keywords: medical education case library; practice path biomedical research; disaster medicine; geriatric nursing; public health

1. Introduction

With the continuous development of the social economy, people’s demands for physical health are increasing day by day. In order to promote the construction of Healthy China and improve the health of the people, the State Council issued a medium—and long-term action plan on health promotion for all and Healthy China at the national level, in which a series of important goals put forward new requirements for the construction of medicine in China. As a discipline serving people’s health, the cultivation of medical students is related to the development of China’s medical cause and the well-being of the people. It is necessary to take into account both professional knowledge

and moral character as well as humanistic cultivation construction of medical value education in courses is a very good way for medical students to receive medical value education. While helping medical students master clinical knowledge and skills, it can also cultivate them into outstanding medical talents with a compassionate heart, good professional ethics and social morality [1].

The application of case libraries can effectively address the key issues of integrating professional knowledge and medical value education into teaching, providing strong support for teachers, enhancing the teaching effectiveness of professional courses, and assisting in achieving the teaching goal of “cultivating virtue and nurturing talent” [2]. As a highly practical discipline, the policy practices, professional practices and scientific research practices that have emerged in the development of medicine all contain rich medical value education resources. Sorting out these medical education resources and building a systematic medical education case library is of great significance for improving the social responsibility of medical talents and cultivating high-quality medical talents with both ability and political integrity and all-round development in the new era.

2. The Logic and Principles of Constructing Medical Education Case Library

The relevant documents guiding the construction of courses in colleges and universities point out “To implement the fundamental task of fostering virtue and nurturing talent, it is necessary to integrate value shaping, knowledge imparting and ability cultivation, and they cannot be separated [3]. Comprehensively promoting the construction of medical value education in courses means integrating value guidance into the imparting of knowledge and the cultivation of abilities.” deeply deconstructing the requirements of the outline and integrating them with the disciplinary characteristics of medicine, we have distilled three core principles for the construction of the medical education case library, and constructed an educational model that deeply integrates value guidance and professional education with systematic thinking.

2.1. Professionalism and Values Nature Organic Combination

To adhere to the organic combination of professionalism and values, cases should be rooted in medical professional practice, and medical value education should be naturally integrated into the teaching of professional knowledge. The following four cases analyzed were polio vaccine research and development, disaster medical rescue, geriatric nursing service and public health system construction, which were all examples of the organic combination of professional practice and dedication, scientific ethics, humanistic care and other values.

2.2. The Synergy between Historical Dimensions and Current Demands

To emphasize the synergy between historical dimensions and current demands, the case library should cover medical practices from different historical periods. From disease prevention and control in the early days of the founding of the People’s Republic of China to the response to aging in the new era, it not only reflects the historical continuity of the development of the medical cause, but also highlights its adaptability to the challenges of The Times.

2.3. The Unity of Individual Spirit and National Strategy

Finally, the case should not only vividly show the professionalism and dedication of medical staff (such as the self-testing of Gu Fangzhou team and the fearless rescue actions of Wenchuan medical staff), but also profoundly reflect the “people-centered” health concept of the Party and the state, and emphasize the deep echo of individual spirit and national strategy.

3. Multi-Dimensional Construction and Value Presentation of Medical Education Scenarios

The four cases are selected based on three dimensions: time, subject and practice, systematically constructing multi-level, three-dimensional and organically linked medical education scenarios.

3.1. Time Dimension

In terms of the time dimension, the case library covers the early days of the founding of the People’s Republic of China (polio prevention and control), the new era (aging response and disaster system improvement), as well as the development process of public health services from the founding of the People’s Republic of China to the present/the establishment and improvement of the public health system, demonstrating the historical inheritance of medical education.

3.2. Subject Dimension

In terms of the subject dimension, the four cases encompass multiple responsible subjects in medical practice. In order to protect more families from the threat of polio, scientific research workers (Gu Fangzhou team) ended the polio epidemic with polio vaccine, and their social responsibility is reflected in tackling the root cause of the disease. Facing the survivors of the Wenchuan earthquake who urgently need both physical and mental treatment, frontline medical workers (those involved in the Wenchuan rescue) braved the danger of aftershocks and worked around the clock to provide rescue. Their social responsibility was reflected in the emergency intervention of lives. Policy makers (National Health Commission of the People's Republic of China) have established a complete public health and elderly care service system for our country through institutional design, which can be continuously updated in accordance with social needs, to meet the elderly's demands for elderly care and the health pursuit of the general public in our country, and have taken the initiative to assume the responsibility of system construction. The four cases respectively reflect the social responsibilities of different roles.

3.3. Practical Dimension

In terms of practical dimensions, the four cases cover scientific research breakthroughs, system construction, emergency rescue, and daily care, comprehensively covering medical practice scenarios and making medical education more layered. The polio vaccine case focuses on the original innovation in the field of basic scientific research (live vaccine isolation technology, sugar pill formulation) and the outstanding dedication and sacrifice spirit of scientists (Gu Fangzhou team), which is a classic material to cultivate research ethics, national feelings and innovation consciousness. The medical case of the Wenchuan earthquake disaster showcases the practice of disaster medical rescue under extreme conditions (mass casualties and environmental damage), highlighting the collaboration of front-line teams, the construction and improvement of the emergency response system (establishing professional disciplines, certification systems, and planning goals from scratch), as well as the extraordinary courage and humanistic care demonstrated by medical staff in times of crisis. It can well interpret emergency response capabilities, professional spirit, institutional reflection and reconstruction. The case of geriatric nursing development reflects the long-term and systematic challenges in the period of social transformation (population aging), demonstrates the process of policy accurate identification of problems (insufficient service, shortage of talents, lack of standards) and systematic implementation of policies (supporting documents, revitalization of resources, personnel training, standard formulation), and helps to understand policy response, people's livelihood care, scientific management and sustainable development. The public health system construction case provides a longitudinal view of the national health endeavor's historical journey from a weak foundation (average life expectancy of 35 years) to remarkable achievements (average life expectancy of 78.6 years), revealing the complexities (exposed shortcomings during the SARS outbreak) and resilience (institutionalization, informatization, and equalization reforms) of system building. It is a key case for establishing historical perspective, institutional confidence, a holistic viewpoint, and the principle of prevention first.

4. Integration of Cases Based on Multidimensional Practical Scenarios and Extraction of Medical Education Elements

Following the construction principles outlined above, this study selected four highly representative cases from medical practice, which together form a multidimensional and structured scenario for education in medicine.

4.1. Scientific Breakthrough and Mission Responsibility: The Case of Polio Vaccine Development

4.1.1. Medical education Objectives

By presenting the story of Gu Fangzhou and his team's development of the polio vaccine, this case aims to cultivate students' sense of social responsibility embodied in the spirit that "success may not depend on me, but I must contribute to it," inspire profound patriotism and dedication to the nation, and guide students to embrace the philosophy that "medical research serves the people and relies on the people." Ultimately, it seeks to stimulate students' internal motivation for learning and strengthen their sense of mission in future medical research.

4.1.2. Case Content

Poliomyelitis, also known as polio, is a highly infectious disease that can cause loss of motor function and even death, and has long been listed as a major global public health challenge. In the early period of the founding of the People's Republic of China, epidemic traces of poliomyelitis were found in China. According to the list of notifiable infectious diseases issued by the national health authorities in 1953, after the disease was officially

included in the surveillance system, the number of reported clinical cases in various regions continued to increase, and the affected areas also continued to expand.

In March 1959, Gu Fangzhou et al. were sent to the Soviet Union by the Ministry of Health to investigate the production process of polio vaccine. Based on the actual situation in China, he proposed that China should adopt the live vaccine route instead of the dead vaccine route and immediately reported the investigation to the Ministry of Health. The Ministry of Health subsequently adopted his suggestion. In December of the same year, with the approval of the Ministry of Health, the Polio Live Vaccine Research Cooperation Group was established, headed by Gu Fangzhou, who was responsible for formulating and implementing the polio vaccine research plan [4]. He developed a two-step research plan including animal experiments and clinical trials, and successfully passed the animal experiment and entered the clinical trial stage. Gu Fangzhou and his team were the first to receive the vaccine without hesitation, and confirmed that their vital signs were stable during the observation period of one week. Subsequently, they also vaccinated their children, who also showed no adverse reactions [5].

Phase 3 clinical trials are mainly to test epidemiological effects [6]. Through cooperation with health and epidemic prevention stations in 11 cities such as Beijing, Shanghai and Qingdao, nearly 4 million children under the age of 7 have received vaccine testing [6]. The results showed that the vaccine significantly reduced the incidence, flattening the seasonal peak [6]. The results of phase III clinical trials have shown that live vaccines are safe and effective, with good immunological and epidemiological effects [6]. In 1961, the cooperative team continued to set up a professional team to go to Kunming Medical Research Institute to expand the scale of experimental production and establish a production base [6].

After the decision to adopt the live vaccine immunization route in 1959, due to the strict requirements for low temperature of the live vaccine, it was necessary to improve the dosage form to ensure the quality of the vaccine. 1960, Gu Fangzhou creatively put forward the idea of developing a “sugar pill” vaccine. After three years of scientific research, the formula and preparation technology of “sugar pill” have been continuously improved., the “sugar pill” vaccine, which could prolong the shelf life at room temperature and 4–8 °C, was successfully introduced in 1963 [6]. In 1964, the vaccine was promoted throughout the country, and was greatly welcomed by epidemic prevention workers, parents and children, becoming a new powerful weapon for the prevention, control and eradication of polio [6]. In the following time, under the guidance of Gu Fangzhou, the Institute of Biology successfully developed a sugar pill trivalent vaccine after years of repeated trials and adjustment of the dosing ratio of various vaccines [6]. In 1971, Professor Gu Fangzhou moved to the Chinese Academy of Medical Sciences for work [6]. However, he has always paid close attention to the production, use and existing problems of live attenuated polio vaccine, and often gave guidance and help [7]. Professor Dong Dexiang recalled that each time he visited Beijing, Professor Gu Fangzhou would ask and discuss all the details of polio research [6]. Finally, in 2000, the “Signing Ceremony of the Confirmed Report of Polio Eradication in China” was held in the former Ministry of Health, Gu Fangzhou signed as a representative, which marked that China officially became a polio-free country [4].

4.1.3. Application in Classroom Teaching

The application methods in classroom teaching mainly include the following links. First of all, in the introduction section, we can introduce the definition of science and scientific research, and introduce the important story of Gu Fangzhou and his team’s research and development of polio vaccine and the eventual eradication of poliomyelitis in China. In the development part, the teacher can systematically tell the historical background and development process of the story: in the 1950s, the epidemic of poliomyelitis appeared and spread gradually in China, and the disease was listed as a notifiable infectious disease in 1953. Gu Fangzhou led a team to successfully develop a vaccine. In order to verify the safety of the vaccine, he and his colleagues even took it themselves, and Gu Fangzhou even carried out clinical trials on his own children. After the successful development of the vaccine, he creatively proposed the idea of oral sugar pill dosage form in the face of the storage and transportation problems. In 1963, the oral sugar pill vaccine was published, and a single dose could establish an immune barrier. This dosage form reform not only solved the problem of practical application, but also became an important innovation in the history of polio prevention and control in China. With the help of vaccines, China successfully achieved the goal of polio-free in 2000. In the summary stage, through this case, students are guided to recognize that scientific research and the formulation of public health policies must be based on reality and cultivate a spirit of seeking truth from facts. At the same time, it is emphasized that personal interests and national interests complement each other. Only by giving full play to personal talents and values can one better contribute to the country and achieve the unity of the two. In addition, it is necessary to cultivate students’ sense of social responsibility and patriotic feelings, establish the concept that “medical research serves the people and relies on the people”, and stimulate

their internal motivation for learning and a sense of mission to engage in medical research in the future. Finally, during the feedback session, students can be invited to share their learning experiences and insights, and to reflect on the qualities and character that an outstanding medical researcher should possess.

4.2. The Development and Practical Exploration of Disaster Medicine in China under the People-Centered Philosophy: Starting from the Wenchuan Earthquake

4.2.1. Medical Education Objectives

Through disaster medical practices and humanistic care demonstrated during the Wenchuan earthquake relief efforts, this case aims to illustrate the Party and state's "people-centered" value orientation, as well as the professional spirit of medical workers—"technology as the foundation and humanism as the core". Through the introduction of medical staff in disaster relief, this case provides an example for cultivating medical personnel with social responsibility in the new era, trains students to establish the concept of social responsibility, guides students to adhere to the humanitarian spirit of saving lives and helping the wounded, and makes students understand the moral cultivation requirements for medical staff in the new era. By introducing the development process of disaster medicine in our country, this paper makes students realize the great contribution made by the medical predecessors to the development of disaster medicine in our country, cultivate students' love for medicine, and stimulate students' enthusiasm for dedication to medicine.

4.2.2. Case Content

Every year, natural disasters such as earthquakes, floods, fires, storms and droughts affect different regions and are often accompanied by economic and human losses [7]. In addition, the severity, scale, and factors of these events were extremely high [7]. China is one of the countries with the worst natural disasters in the world. With global climate change and China's rapid economic development and urbanization, China's resources, environment and ecology are under increasing pressure, and the situation of natural disaster prevention and control is more severe and complex [8]. Therefore, promoting the development of disaster medicine is extremely urgent. This is the need of the people. It concerns saving precious lives to the greatest extent and reducing the suffering of disability when sudden disasters rage. This is the call of the era. It reflects the modernization level of a country's governance capacity to ensure people's livelihood security and maintain social stability in the face of major crises. It is an indispensable strategic fulcrum and key support for building a resilient society and safeguarding national security. Only by establishing a complete disaster medicine system can we build a solid defense line to safeguard people's well-being in the face of various uncertainties in the future. This is a noble cause that benefits the present and future generations.

The Chinese government adheres to the people-oriented concept, incorporates disaster reduction into economic and social development plans, and regards it as an important guarantee for achieving sustainable development [8]. In 1980, China issued a fundamental policy document guiding the construction of a modern urban emergency rescue work system, which for the first time set standards for the establishment of emergency centers (stations) and proposed the prototype of an emergency rescue network of "central emergency station—emergency sub-station" [9]. For the first time, the planning of pre-hospital emergency stations (points) has been clearly incorporated into the regional health development plan and the overall urban and rural construction development plan [9]. In 1995, the Ministry of Health issued a normative document to guide emergency medical rescue in natural disasters and accidents, which for the first time standardized the management of disaster medicine work from aspects such as organization, disaster situation reporting, on-site medical rescue, evacuation of the injured and sick, departmental coordination, and personnel training [10]. In 2001, China's first national-level rescue team—the China National Earthquake Disaster Emergency Rescue Team—was officially established and has played a leading role in many rescue operations [11].

At the beginning of the 21st century, China's disaster medicine still has shortcomings. Due to the late start, the content of disaster nursing education in China has not been unified, and disaster education and training have not been included in the basic nursing education curriculum [12]. This affects the level of disaster rescue in China, and is not conducive to the development of disaster medicine. In our country, the exploration of emergency material allocation and management is relatively backward. The emergency material allocation system and emergency rescue mechanism are imperfect, and there are phenomena such as low level of emergency management, imprecise and delayed allocation of materials [13]. The turning point came in 2008. The 2008 Wenchuan earthquake is a major natural disaster in our country, causing nearly 70,000 deaths, more than 370,000 injuries and nearly 20,000 missing, which has brought huge losses to our country [14].

In the post-disaster rescue, the medical staff showed outstanding professionalism and humanitarian care. After the Wenchuan earthquake, medical staff all over the country rushed to the disaster area. They fear no danger and fight day and night on the front line of rescue, providing timely and professional treatment and care for the injured people. They touched every injured person with warm hands, conveyed hope with determined eyes, and soothed panicked hearts with gentle words. They moved through the ruins, braving the danger of aftershocks, searching for every life in need of help. Whether it is providing emergency treatment for seriously injured patients or offering psychological comfort to those with minor injuries, medical staff have won people's respect and gratitude with their meticulous care and superb skills.

The disaster relief work has come to an end, but the exploration of disaster medicine in our country is far from over. The field of disaster medicine in our country has been constantly making breakthroughs in post-disaster review. After the Wenchuan earthquake in 2008, the Chinese government paid more attention to the construction of emergency response system, the establishment of disaster prevention and reduction system and the development of disaster medicine projects [15]. After that, more than ten years, disaster medicine developed steadily in our country.

After the "Wenchuan earthquake" occurred in 2008, the Third Military Medical University, Logistics College of Chinese People's Armed Police Force, Tongji University and other medical colleges have established relevant teaching organizations or institutions such as rescue medicine, disaster medicine teaching and research section, emergency and disaster medicine Department [16]. On 16 January 2014, the "Department of Disaster Medicine Science" was officially established by Sichuan University and the School of Post-Disaster Reconstruction and Management of the Hong Kong Polytechnic University [16]. In response to the lack of disaster medicine courses in Chinese universities, in 2009, disaster relief medical textbooks were published, and many rescue guidelines and standards were established [17]. In the same year, the Medical College of the People's Armed Police Force established the first Department of medical rescue medicine (M.D. degree) [17].

At the end of 2011, the Society of Disaster Medicine of the Chinese Medical Association was formally established in Pudong, Shanghai [18]. Subsequently, the Society of Disaster Medicine successively established several groups for earthquake, fire, flood, explosion, and science popularization, which laid a talent reserve foundation for the start of disaster medicine in China [18].

In 2016, China International Emergency Medical Team (Shanghai) was certified by the World Health Organization (WHO), becoming one of the first international emergency medical teams in the world [19]. In 2017, China International Emergency Medical Team (Guangdong) passed the WHO certification, becoming the second international emergency medical team in China to be certified by WHO [20]. On 5 May 2018, the China International Emergency Medical Team (Sichuan), led by West China Hospital, was officially certified by the World Health Organization, becoming the third international professional medical emergency rescue team in China [21]. This undoubtedly provides reference for the construction of domestic emergency medical rescue team [21].

On 31 December 2022, the National Health Commission issued the national special plan to guide the construction of China's emergency medical rescue system for emergencies from 2021 to 2025. This plan has promoted various aspects of disaster medicine from a policy perspective, including the development of information command systems, sea, land and air transfer and dispatch, and medical rescue in emergencies. As well as the construction of echelon talents, drills and training related to emergency medical rescue, research on the summary of rescue time and the transformation of achievements, etc. [22]. However, for disaster medicine, there is no so-called one-and-done, and new challenges follow one after another: insufficient rescue information sharing in the industry, imperfect communication system inside and outside the hospital, and the need to accelerate professional personnel training and discipline construction [22]. The new era has once again put forward new requirements for disaster medicine, and disaster medicine in our country will continue to develop to ensure the safety of people's lives and property and to fulfill the concept and commitment of "putting people and life first".

4.2.3. Application in Classroom Teaching

At the beginning of the course, a documentary about the Wenchuan earthquake relief can be played to introduce the case, attract students' attention, and naturally lead to the theme of this class—the development of disaster medicine. Subsequently, teachers can conduct an in-depth analysis of the specific manifestations of the professional spirit of medical staff during the Wenchuan earthquake rescue process and the development process of disaster medicine in China, guiding students to understand the requirements of medical staff in terms of professional ethics and sense of responsibility, and enhancing their understanding of the concept of disaster medicine. On this basis, students were organized to have group discussions, and consulted the actual events in Wenchuan earthquake rescue and the development of disaster medicine by books, Internet and other means, so as to enhance their learning impression through self-exploration. Each group can select one representative to speak

and share the viewpoints and experiences of their group. At the end of the course, a summary and elevation are conducted, emphasizing the high regard of the Party and the state for people's life safety, reiterating the significance of the professional spirit and sense of social responsibility of medical staff, and encouraging students to combine the knowledge they have learned with real-world problems, thereby enhancing their ability to solve practical issues.

4.3. Targeted Solutions, Localized Strategies: The Rapid Development of Elderly Care Driven by Policy in China

4.3.1. Medical Education Objectives

Through the narration of the development process of geriatric nursing in China, students' understanding of the concept of geriatric nursing was deepened, students were deeply aware of the key role of geriatric nursing in China and the efforts made by the Party and the state to promote the development of geriatric nursing, students' social responsibility was cultivated, and their enthusiasm for medical career was stimulated.

4.3.2. Case Content

In 2000, China entered an aging society and the degree of aging is deepening. Not only brings great pressure to society and family, but also provides opportunities and challenges for the development of geriatric nursing. Compared with foreign countries, geriatric nursing in China started late and developed slowly. China's geriatric nursing discipline was still in its infancy in the 20th century. Early 21st century, a series of problems caused by aging were highly valued by the Party and government. In terms of talent training, policy guidance and other aspects, many relevant institutions and governments at all levels in China have issued a series of relevant documents and policies, which effectively promote the development of China's geriatric nursing [23]. However, due to a series of complex reasons, the development of geriatric nursing in China is still not smooth.

In this series of reasons, there is the influence of the weakness of the teaching staff. For example, by 2015, most of the teachers engaged in geriatric nursing teaching in China were transferred from other nursing teaching posts, and few of them had a special background in geriatric nursing [24]. Most of the teachers' education level is limited to junior college or bachelor's degree, and they have not received systematic training for teachers of geriatric nursing [24]. At the same time, there are also unreasonable setting of the course hours of geriatric nursing. As of 2015, geriatric nursing courses have not been popularized in nursing schools across the country [24]. According to a national survey conducted by the Nursing Teaching Steering Committee of the Ministry of Education of China, among 110 nursing colleges and universities enrolled in China, 73 colleges and universities (54.5%) set up geriatric nursing courses, with an average of 30 h of total class hours, including 26 h of theory courses and 4 h of practice courses [24]. Although nursing colleges in China have set up geriatric nursing courses in succession, there are few classes in the direction of geriatric nursing [24]. It can be seen that at that time, the education system of geriatric nursing in China was far from mature, and the development of geriatric nursing disciplines could not meet the nursing needs of the elderly.

The wheel of history will not stop, with the development of The Times, China's population structure is constantly changing, in the new era, China's elderly care has encountered a series of new problems, and is still facing great challenges. According to the statistics of the National Bureau of Statistics, in 2019, the population aged 60 and above accounted for 18.1% of the total population in China, of which the population aged 65 and above accounted for 12.57% of the total population [25]. However, five years later, in 2024, the population aged 60 and above in our country accounted for 22% of the total population, and the population aged 65 and above accounted for 15.6% of the total population [26]. In the past five years, the demand for professional nursing services for the elderly in China has shown a rapid growth. At present, China has entered the aging stage, and it is expected that the proportion of the elderly population aged 65 and above will exceed 20% in 2040, and China will enter the super-aging society [27]. It can be inferred that the demand for geriatric care in our country will continue to grow for a long time in the future.

At that time, in the face of the people's growing demand for nursing services, the elderly nursing in our country faced three major problems. First, insufficient service supply caused by insufficient service resources. By 2015, there were only 61 geriatric hospitals in China, including only one tertiary hospital, 19 secondary hospitals and 18 primary hospitals, which were mainly concentrated in Beijing [28]. Second, the immaturity of China's elderly care nursing education system. To date, undergraduate nursing education still does not offer a specialized major in geriatric nursing, highlighting an urgent need to strengthen the training of professionals in this field. The number of nurses engaged in community-based elderly care is limited, and their academic qualifications are generally low. Moreover, they have not received systematic education in community nursing or geriatric care,

resulting in outdated knowledge and an irrational skill structure [24]. Obviously, it is very difficult for the current group of nurses engaged in geriatric nursing to meet the growing demand for geriatric nursing in our country. Especially in the context of the continuous enrichment of the concept of geriatric nursing and the gradual diversity of needs, we are in urgent need of high-quality nursing talents with high education, who have received systematic community nursing and geriatric nursing education and can continue to learn new knowledge. Third: the lack of standardization of geriatric nursing in China. The lack of unified evaluation standards for geriatric nursing in China leads to serious service homogeneity and difficulty in meeting individual needs. Until 2017, there was no unified standard for the assessment of the living ability of the elderly in China. The assessment standards of the ability of the elderly in the pension projects of various provinces are different, and the standards among different cities, different departments and different institutions are also highly unified [29].

In response to the series of challenges facing elderly care in China, the Party and the government has introduced a range of targeted policies and documents to address the concerns and meet the expectations of the people.

In response to the problem of insufficient resources for geriatric nursing services, the National Health Commission of the People's Republic of China jointly issued a comprehensive reform framework document to guide the construction and development of China's nursing service system on 21 June 2018, which put forward the goal of achieving orderly and reasonable nursing services of medical institutions and closer division of labor and cooperation by 2020 [30]. The document requires a significant increase in the number of nursing homes, nursing centers, rehabilitation medical centers, and hospice care institutions, and a continuous expansion in the supply of geriatric care and hospice care services [30]. According to the spirit of the document, some primary and secondary hospitals will be transformed into nursing homes, nursing centers, etc., and the supply of services such as geriatric nursing, rehabilitation nursing, and home care will be effectively expanded by invigorating local resources [30]. According to the blue book released by the Chinese Geriatrics Society, by the end of 2022, the number of geriatric hospitals in China was 3062, including 439 tertiary geriatric hospitals, 1195 secondary geriatric hospitals, 744 primary geriatric hospitals, and the remaining 684 ungraded hospitals [31].

In response to the immaturity of the geriatric nursing personnel training system, the Health Commission of the People's Republic of China issued a program training document and its supporting technical standards on 20 December 2019, aiming to standardize and improve the quality of geriatric professional nursing services and personnel capabilities [32]. Strict and specific regulations have been made on the training duration for geriatric care professionals in medical institutions of different levels. Not only that, the document also sets requirements for the content of the training. Compared with the previous training, in the new training, the learning content for professionals keeps pace with The Times, the total class hours are more sufficient, and the distribution of class hours is more reasonable. The document clearly requires all medical institutions to refer to the requirements of the outline and, in light of their own actual conditions, carry out elderly care training to effectively enhance the elderly care service capabilities of the nursing team [32].

In view of the lack of standardization of geriatric nursing in China, the National Health Commission of the People's Republic of China issued a policy document on 26 August 2019 to guide various medical institutions to conduct standardized assessment of the nursing needs of the elderly and provide graded nursing services [33]. This document classifies the functional abilities of older adults into five levels (Level 0 to Level 4), clarifies the assessment criteria, and standardizes the qualifications of service institutions, service content, and staff training [33]. The document has successfully promoted the transformation of elderly care in China from an experience-based model to a scientific and standardized practice.

With strong support from the Party and the state and driven by policy guidance, the cause of geriatric nursing in China has demonstrated leapfrog development. By deepening the precise alignment of institutional supply and supporting measures, the policy framework in the field of elderly care has become increasingly well-structured, the service network continues to expand, and professional capabilities have been significantly enhanced. Gradually, a modern service system that covers the whole life cycle and diverse scenarios of care needs is being built. This development path reflects the underlying rationale of the national strategy for actively responding to population aging, injecting strong impetus into the well-being of the elderly population.

4.3.3. Application in Classroom Teaching

At the beginning of the course, cases can be introduced by explaining the development of geriatric nursing in China in the textbook, which can attract students' attention and naturally lead to the theme of this class-the rapid development of geriatric nursing in China driven by policies. Then teachers should deeply analyze the important contributions made by the Party and government of China in promoting the cause of geriatric nursing, guide students to understand the great advantages of the socialist system with Chinese characteristics, and think about

the responsibilities and requirements of medical students in the field of geriatric nursing in the new era. On this basis, students can be organized to hold group discussions to explore the enlightenment of the development of geriatric nursing to medical students in China, and encourage them to actively express their views and opinions. At the end of the course, it was summarized and improved, emphasizing the significance of geriatric nursing under the background of increasing population aging, and guiding students to combine theoretical knowledge with practical learning scenarios to continuously improve the ability to solve practical problems.

4.4. Hurdles Overcome, Strides Taken: The Rapid Advancement of China's Public Health System

4.4.1. Medical Education Objectives

By describing the development of public health in China, students can deepen their understanding of the concept of public health, make them deeply feel the key role of public health and the efforts made by the Party and the state to promote public health, cultivate students' social responsibility, and stimulate their enthusiasm to join the medical career.

4.4.2. Case Content

Before the founding of the People's Republic of China, China was faced with an extremely severe public health situation: the maternal mortality rate was as high as 1500/100,000, the neonatal mortality rate was as high as 200‰, and the average life expectancy was only 35 years old [34]. In order to change this situation as soon as possible, the First National Health Conference held in Beijing from 7–19 August 1950 established the four major health work principles guiding the development of China's health service: "facing workers, peasants and soldiers", "prevention first", "uniting traditional Chinese and Western medicine, and combining health work with mass movement" [35]. This marked the beginning of the construction of public health undertakings in New China.

China implemented disease prevention and environmental improvement through mass mobilization initiatives. Successive campaigns, such as clean-up drives and the Patriotic Health Campaign, were launched, becoming defining practices of this period. Chinese people have overcome a variety of raging infectious diseases, and the national public health and epidemic prevention system has been continuously established and improved, which has greatly improved people's health level [36]. In 1965, Comrade Xiaoming issued a call to "put the focus of medical and health work to the countryside", which gave birth to the barefoot doctor system. Barefoot doctors were grassroots healthcare providers serving in rural China who received basic medical training and possessed essential healthcare knowledge and skills, while continuing to engage in labor [37]. They went into the fields and provided timely and convenient medical services for farmers, which won the heartfelt support and high praise of the vast majority of farmers [37]. The barefoot doctor system has initially solved the dilemma of a shortage of medical services and medicines in rural areas of our country, protected the life and health of farmers in our country, and contained the spread of epidemic diseases in rural areas [38]. Through a series of measures, China has made remarkable achievements in the field of public health, and was once praised as "a model for developing countries" by the WHO. During this period, through a series of measures, China took the lead in the world in declaring the eradication of smallpox, successfully controlled the epidemic of major infectious diseases such as cholera and plague, and effectively contained the high incidence of schistosomiasis [38]. By 1978, the average life expectancy of our country had increased to 66.5 years old, and the infant mortality rate had dropped to 41.02‰ or less [39].

The development of public health in China did not stop at this point, but continued to move forward under the unremitting promotion of the Party and the state. In 1978, in response to the global Expanded Program on Immunization (EPI) proposed by the World Health Organization (WHO), China established its EPI system for the first time, and established a series of management systems and methods [40]. In 1982, the Ministry of Health established the Expert Committee on Immunization Programs under the Medical Science Commission. Since the launch of the program on immunization, China has incorporated multiple vaccines into the national immunization schedule based on practical needs. The number of vaccines included in the National Immunization Program has continued to increase, expanding from the initial "4 vaccines against 6 diseases" to "14 vaccines against 15 diseases" by 2024. Through the continuous promotion of the immunization program, China has effectively brought multiple infectious diseases under control [41]. After the reform and opening up, affected by the economic system reform, the development idea of China's health service began to change to market and commercialization, and the emergency response ability of China to deal with sudden public health crises has been weakened under the policy guidance of disease prevention and control service "profit". The grassroots public health and epidemic prevention system even reached a point where its frontline defense capacity was severely compromised [42].

The outbreak of SARS in 2003 exposed the weak links in China's public health emergency response system, causing attention and reflection of the state and society on medical and health. After the SARS epidemic, China's

health care industry underwent a major strategic shift, and the SARS epidemic became a turning point in the development of China's public health system [42]. After the SARS epidemic in 2003, China further increased its resource input in the field of public health and strengthened the construction of the public health prevention and control system [43]. A disease control system has been established that covers all administrative levels, accompanied by continuously increasing financial investment in public health [44]. Financial support has been steadily strengthened, particularly for the development of systems for disease prevention and control and medical emergency response [44]. During and after the outbreak of SARS, China continued to summarize the experience during the epidemic, formulated a large number of policies, issued a series of documents, and provided important guidance for the improvement of China's public health system through administrative means. These documents cover disease prevention, control measures, medical care and outbreak surveillance, aiming to improve the capacity to respond to public health emergencies.

On 7 May 2003, The State Council promulgated a national regulation on establishing the organizational framework, operating mechanism and legal responsibilities for responding to major public health crises, which came into force on 9 May 2003 [45]. A procedural operation document on the classified management of infectious diseases, epidemic reporting procedures and control measures was revised and adopted on 28 August 2004, and took effect on 1 December 2004 [45]. On 7 November 2003, an administrative measure stipulating the procedures for surveillance, reporting, investigation and control of public health emergencies and notifiable infectious diseases was promulgated and came into force as of the date of promulgation [45]. On 27 December 2005, a work guide was issued to guide and standardize health institutions at all levels in the reporting, confirmation and grading management of public health emergency information, which came into effect on 1 January 2006 [45]. The promotion and implementation of these laws and regulations systematically established China's legal system for the prevention of infectious diseases, epidemic surveillance and reporting, risk assessment and early warning, and marked the beginning of China's infectious disease surveillance and response work on the track of legal and standardized management [45].

At the same time, the concept of disease prevention and control in China has also undergone major changes. By constructing a five-level disease prevention and control network of "nation-province-city-county-town", China has further strengthened the intensity of infectious disease surveillance and realized the principle of "case, real-time and online" in the reporting of infectious diseases and public health emergencies [46]. In July 2007, the Information Center of the Chinese Center for Disease Control and Prevention launched a pilot initiative to connect the online direct reporting system with hospital information systems. This effort aimed to promote interoperability between healthcare and prevention systems, thereby providing robust data support for the prediction and early warning of infectious diseases. The system was upgraded in 2010, achieving a real-time, online, and direct reporting mechanism for cases of statutory infectious diseases from healthcare institutions [46].

In March 2009, a programmatic document guiding the systematic reform of China's medical and health services since 2009 was promulgated and implemented [47]. The document stipulates that the construction of four major systems should be built, and the comprehensive strengthening of the public health service system is one of them [47]. The document puts forward five key reform tasks, "promoting the gradual equalization of basic public health services" is one of the five key reform tasks [47]. Since 2009, the state has gradually provided urban and rural residents with basic public health services such as disease prevention and control, health education, and maternal and child health care, according to the document [47]. In July of the same year, the institutional document that clarifies the government's responsibility to provide basic public health services free of charge to the whole population on a project basis issued by the Ministry of Health, the Ministry of Finance and the National Population and Family Planning Commission clarified the contents of national basic public health services, mainly including the establishment of residents' health records, health management of the elderly and other 9 services, and the per capita expenditure standard should not be less than 15 yuan [47]. Since then, basic public health services have been established as a comprehensive and long-term system and have been continuously consolidated.

From 2011 to 2017, China has successively included a number of contents into the basic public health services, and the number of basic public health services increased to 14 [47]. In October 2016, the state issued a national medium—and long-term action program on health promotion for all and Healthy China [48]. The policy of "prevention first and combination of prevention and treatment" has been put forward, and a health service system covering the whole life cycle has been planned. The average life expectancy has been set to reach 79 years old, and the infant mortality rate has been reduced to 5.0‰ by 2030 [48].

Since 2019, the state has successively issued national programmatic documents guiding disease prevention and health promotion work in China from 2019 to 2030, aiming to promote a systematic social action plan that shifts from a disease-centered approach to a people's health-centered one [49]. It stipulates policy and institutional documents such as the work plan for the organizational management system, monitoring and evaluation, and

performance assessment mechanism of the Healthy China Initiative, and has established the Healthy China Initiative Promotion Committee to promote the implementation of the Healthy China strategy [49]. They defined the content and organization of 15 special actions, such as health education, reasonable diet and national fitness, and refined the 15 special actions [49]. The specific goals, indicators, tasks and responsibilities of each action were defined to ensure the implementation of the actions. At the same time, it emphasizes the construction of organizational institutions, monitoring and assessment [49]. A series of documents of the Healthy China Initiative have transformed the traditional “disease” as the center into the modern “health” as the center, and moved the pass of disease prevention forward [49].

In order to continuously promote the equality of basic public health services and enhance the balance and accessibility of basic public health services, on 9 September 2024, the National Health Commission, the Ministry of Finance, the National Administration of Traditional Chinese Medicine and the National Disease Control and Prevention Bureau jointly issued a work plan to guide the fund use and task implementation of the national basic public health service project in 2024, clarifying the ways to increase funding and annual performance targets [50]. For example, the per capita financial subsidy for basic public health services will be increased to 94 yuan, and the cumulative increase in funds and new funds from 2020 to 2023 will be used to expand the coverage of the beneficiary population, such as the elderly and patients with chronic diseases [50]. On 23 June 2025, four government departments jointly issued a work plan to guide the use of funds and task implementation of national basic public health service projects in 2025, which further raises the per capita financial subsidy standard for basic public health services to 99 yuan [51]. The notice emphasizes improved services for elderly and child health and the management of chronic diseases [51].

Under the strong leadership of the Central Committee of the Communist Party of China, China is committed to building a basic medical and health care system covering all citizens. The total amount of medical and health service resources has continued to grow, and the medical technology capacity and medical quality level have been constantly improving. In recent years, our country’s health cause has made remarkable achievements. According to the Statistical Bulletin of China’s Health Development in 2023, the average life expectancy in China has more than doubled to 78.6 years old, compared with 35 years old in 1949, and the infant mortality rate has dropped to 4.5‰, both of which have reached a record high, and a road of health development with Chinese characteristics has been established [52].

China has launched the Healthy China Initiative and the Patriotic health campaign, and carried out a number of health knowledge publicity activities. The health literacy level of residents has risen from 17% in 2018 to 29.7% in 2023. Meanwhile, 1052 national sanitary cities and counties and 2637 national sanitary towns have been established across the country. The per capita funding for the Equalization of Essential Public Health Services project has risen from 15 yuan in 2009 to 99 yuan in 2025 [52]. Under the guidance of the Party’s health and health work policy in the new era, China’s public health service is taking systematic reform and institutional breakthrough as the core driving force, and gradually building a modern public health system that covers the whole life cycle and serves multiple needs [47].

4.4.3. Application in Classroom Teaching

When teaching the development of public health, we can introduce the important events in the history of public health in the early period of the founding of the People’s Republic of China, such as the “patriotic health movement” and the “anti-bacteriological war”, into the course cases, so as to stimulate students’ interest and curiosity in learning, and guide them to think about the importance of public health. Following this, students can be organized into group discussions focusing on topics such as how to draw on international experience to improve China’s public health system. During the discussion, the instructor should encourage students to actively participate and facilitate the exchange of diverse perspectives, thereby fostering critical thinking and teamwork skills. On the basis of students’ discussion, teachers can summarize and guide the analysis, dig deeply into the ideological and political elements behind the case, help students understand the key role of public health and the efforts of the Party and the state, so as to enhance students’ social responsibility and stimulate their enthusiasm to devote themselves to the medical career. At the end of the course, teachers can assign group practice homework, let students visit the primary community health service center in the form of a group, carry out the investigation of “the implementation status of basic public health service projects”, and complete a small investigation report, and finally group report in the demonstration class.

5. The Common Value Educational in the Case Libraries

A comprehensive examination of these four typical cases reveals that the medical value educational elements they contain jointly form the value foundation of medical education and demonstrate distinct stratification in specific practices. From the perspective of the common kernel, the four cases deeply highlight the three core values that run through the whole process of medical practice and education.

5.1. *The Value Thread Centered on the People*

This concept is the core value orientation throughout all cases. The Party and the state have always taken the goal of ensuring the health of the whole people as the foundation for the rapid realization of universal vaccination of polio vaccine after its introduction. In view of the deficiencies in various aspects of disaster nursing in China, numerous disaster medicine workers conduct research from different perspectives, and put forward suggestions based on research results, reflecting the people-centered value pursuit and the ethical consciousness of the supremacy of life, as well as the practical character of seeking truth from facts and keeping with The Times. In order to meet the needs of the people for disaster medicine, the National Health Commission has issued a national special planning document to guide the construction of China's emergency medical rescue system for emergencies from 2021 to 2025., which reflects the value orientation of the Party and the country of "people-centered", and reflects the core concept of the Party Central Committee of "people first, life first". The introduction of a series of documents on geriatric nursing reflects the development thought of "people-centered", meets the real needs of the elderly, serves the people, and demonstrates the great superiority of socialism with Chinese characteristics.

Health is a necessary requirement to promote people's all-round development and a basic condition for economic and social development. The realization of citizen health and longevity is an important symbol of national prosperity and national rejuvenation, and is also the common wish of people of all ethnic groups [53]. Whether it is the barefoot doctor system in the early days of the founding of the People's Republic of China, the patriotic health movement, the later immunization plan, or the medium and long-term action plan at the national level for promoting the health of all citizens and building a Healthy China, its core purpose is to protect people's health and provide better public health services for the people, which shows that the Party and the state attach great importance to people's health.

Although the scenarios of the four cases were different, they all focused on meeting people's health needs. The universal coverage of polio vaccine and the policy of aged care covering the whole life cycle both reflect the concept of "health equity" -- the former makes China polio-free through universal vaccination and protects the health of every child. The latter responds to the needs of an aging society with institutional protection and breaks down regional and economic barriers by strengthening the supply of aged care. Making elderly care a service accessible to all, highlighting the equity and universality of health resources distribution. Emergency rescue needs to respond quickly after the occurrence of disasters, which is immediate, while public health needs long-term system construction and real-time prevention and control, which is long-term. The difference in the time span between the two reflects the diversity of people's health needs. In the face of people's diverse health needs, the Party and the state take corresponding measures according to their characteristics. It also embodies the core goal of meeting people's health needs. Gu Fangzhou's team researches and develops vaccines to protect children's health, public health policies promote universal health equity, Wenchuan rescue reflects the principle of life first, and the development of geriatric nursing responds to the needs of an aging society. This kind of value orientation is highly consistent with the Party and the state's health work policy, and constitutes the core value of the case base.

5.2. *Respect for the Objective Laws of Things*

In the key stage of vaccine technology selection, based on the actual situation in China at that time, the research team creatively adopted the live vaccine technology route to replace the traditional inactivated vaccine scheme. This decision not only adheres to the fundamental principles of virology but also fully combines the actual national conditions, demonstrating the pragmatic spirit of scientific researchers. According to Jiao Yahui, deputy director of the Medical Administration Bureau of the National Health Commission, the standards for the assessment of geriatric care needs not only refer to the domestic practice, but also draw on the international experience [54]. Learning from domestic practices demonstrates the wisdom of adapting measures to local conditions; drawing on international experience reflects the principle put forward by Comrade Mao Zhedong in his work, "We must learn from the strengths of all nations and all countries." By drawing on experience extensively, not only domestic experience, but also international experience, we can understand the real needs of geriatric nursing more comprehensively, understand the real expectations of the elderly group more deeply, and ensure that

the content of the standard is closer to reality and more operable. This is not only a sign of respect for the wisdom of the masses, but also an important way to make policy making more scientific and rational.

Comrade Mao Zhedong pointed out in his work that “if there are many contradictions in any process, there must be one of them that is the main and plays a leading role.” A series of policies and documents to help the development of geriatric nursing in China are precisely by grasping the main contradictions in the process of the development of geriatric nursing in China, so as to achieve the effect of “medicine to cure the disease”, rather than stopping at the form. This reflects the great wisdom of the Party and the government in policy making. In addition, the policy response to the problem of “talent shortage”, such as requiring nursing schools to add geriatric nursing courses, reflects the dialectical logic of “practice-theory-practice again” in Comrade Mao Zedong’s work. When formulating standards, by transforming clinical issues into standard-setting problems, it promotes the transformation of nursing from an experience-based model to standardized practice. This approach aligns closely with Comrade Mao Zedong’s principle, “Truth is discovered through practice, and truth is verified through practice.” China’s public health policy has been constantly updated with the changes of China’s situation. In the process of policy iteration, we not only refer to the correct experience of the past, but also correct the shortcomings of the past, reflecting the thought of seeking truth from facts. The vitality of the system lies in keeping pace with The Times. We should not only cherish the historical accumulation, but also give it the connotation of The Times through innovation. This is a vivid embodiment of the confidence in the socialist system with Chinese characteristics.

5.3. The sense of Responsibility to Take the Initiative to Undertake a Mission

The development of the polio vaccine has gone through many difficulties. In the face of this major public health crisis, Gu Fangzhou team took the initiative to undertake the mission of vaccine research and development, and finally broke through the technical bottleneck and successfully developed an effective vaccine by continuing to carry out scientific experiments and technical research, which laid an important foundation for China’s disease prevention and control system. During the rescue operation in Wenchuan, medical workers responded positively to the call of “the whole country as one chessboard”, quickly gathered and rushed to the disaster-stricken area to offer support. This demonstrated the core socialist values of “patriotism” and “dedication”, and showcased extremely high professional qualities and the spirit of selfless dedication. In the face of disasters, nursing staff sacrificed their personal interests for the collective good, disregarded their own safety, and remained at their posts, fully demonstrating the sense of social responsibility of being conscientious and dedicated.

6. Construction and Support of the Core Value System of Medical Education

These medical practice cases, with their authenticity, concreteness and diversity, jointly build the four core support systems of medical education. These four pillars are interwoven and jointly construct the value coordinate of medical education, which lays a solid practical and cognitive foundation for cultivating medical talents in the new era who have both national feelings, professionalism, scientific literacy and confidence in the system.

6.1. Strengthen Social Responsibility and a Sense of Patriotism

The establishment of social responsibility and the strong sense of family and country are reflected in Gu Fangzhou’s insistence on doing only one thing in his life to conquer poliomyelitis, the emergency mobilization of national medical forces in the Wenchuan earthquake for life rescue, the active response of the elderly nursing policy to the “silver wave”, and the public health system’s unremitting pursuit of universal health coverage. These practices enable students to deeply understand the profound connection between medical work and national development, national rejuvenation, and people’s well-being, thereby inspiring them to take on the mission of integrating their personal ideals into the great cause of building a Healthy China.

6.2. Cultivate Scientific Research Wisdom and Practical Rationality

The scientific spirit of “seeking truth from facts and respecting scientific laws” constitutes the internal support of the case. Gu Fangzhou correctly chose the technical route for vaccine preparation based on national conditions, demonstrating scientific research wisdom that is grounded in reality. Disaster medicine and public health respectively confronted their shortcomings and strengthened their corresponding capabilities after the Wenchuan earthquake and the SARS epidemic, both demonstrating the practical rationality of drawing experience from lessons. The formulation of elderly care policies emphasizes scientific assessment (such as the five-level capability

assessment standard), promoting the transformation of services from “experience-based” to “standardized”, highlighting the scientific orientation of decision-making.

6.3. Forging Professionalism and Humanistic Care

The cultivation of professionalism and humanistic care runs through the rigorous and realistic scientific research attitude and dedication spirit of the Gu Fangzhou team, the rescue practice of the medical staff in Wenchuan who risked their lives, the institutional protection of the dignity and personalized needs of the elderly by the elderly nursing policy, and the construction of a medical security network covering 1 billion people in the process of public health service equality. These cases vividly interpreted the professional core of “respecting and protecting life, saving the dying and hurting, willing to dedication, and loving without boundaries”, and provided a fresh carrier for cultivating medical students’ awareness of patient care and life reverence.

6.4. Cultivate Scientific Literacy and Innovative Consciousness

The cultivation of scientific literacy and innovative consciousness is also an important value conveyed by the case. Students learn about Gu Fangzhou’s selection of live vaccine routes based on national conditions and the innovation of sugar pill dosage forms, the standardization construction in disaster medicine (such as the rescue team certification system) and precise planning (such as the development goals of disaster medicine during the 13th Five-Year Plan and the 14th Five-Year Plan), the application of scientific assessment tools in elderly care, as well as the promotion process of informatization in the field of public health. It helps to cultivate scientific thinking and innovation capabilities that respect evidence, follow laws, have the courage to explore and solve practical problems.

7. Discussion

Based on the research and development of polio vaccine, the evolution of disaster medicine, the development of geriatric nursing and the construction of public health system, the medical case base realizes the organic integration of professional practice and medical value education. The case base not only shows the achievements of China’s medical development, but also systematically extracts core values such as social responsibility and country feelings, providing “visible and learned” value resources for medical education.

The values of “people first, life first” are vividly interpreted in these cases. In order to eradicate polio, Gu Fangzhou’s team tested drugs with their own bodies, and Gu Fangzhou himself tested drugs with his own children. This feat demonstrates the supreme respect for individual life. In the Wenchuan earthquake, the medical staff worked day and night against time to save lives, reflecting the professional belief that life comes first in the face of disaster. In order to cope with the aging society, the state has taken the initiative to develop the elderly nursing service system, respond to the “silver hair needs” of millions of elderly people, and the public health policy has been designed to protect the health of the whole people, all of which regard the protection of people’s right to life and health as the highest criterion of medical and health services. The sense of mission and responsibility of “national interests above all else” has become the spiritual link between individual actions and national strategies. Whether it is the dedication of scientific research, the fearless rescue actions of medical staff, or the forward-looking layout of policy formulation and the long-term service of system construction, all transcend the category of personal occupation, sublimation to the collective sense of mission and responsibility of responding to national needs and serving social development. These three core elements are intricately interwoven, collectively forging the soul of value education in the medical field. They provide both a moral compass and a practical reference for cultivating healthcare professionals who embody benevolence and professional excellence, as well as patriotism and societal commitment.

Looking at the journey demonstrated by these cases—from the national efforts to eradicate polio, to the leap from the “starting point” of Wenchuan earthquake to the international accreditation of disaster medicine system; From the rapid construction and improvement of the policy system of elderly care, to the completion of the brilliant leap of public health from the era of “barefoot doctors” to the strategy of “Healthy China”, students can deeply understand the superiority of the socialist system with Chinese characteristics to “concentrate power to do big things”, as well as the successful practice of the Party and state’s “people-centered” development thought in the health field. So as to strengthen the confidence and recognition of the future development of the country and medical undertakings. In the future, it is necessary to further expand the coverage of cases and optimize the teaching application methods, so as to make it an important support for training high-quality medical talents in the new era.

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Reference

1. Chen YX, Ding M, Chen DM, *et al.* Exploration of Ideological and Political Education in the Process of Undergraduate Teaching of Obstetrics and Gynecology. *China Continuing Medical Education* 2021; **13**(32): 109–113.
2. Fang L, Chen LH. Exploration and Practice of Constructing a Case Library for Ideological and Political Education in Immunology for Graduate Students. *Chinese Journal of Cellular and Molecular Immunology* 2024; **40**(9): 859–862.
3. Li JL, Yang BH. Research on Evaluation System of Teaching Effect of “Curriculum Ideology and Politics” Education Based on Three Literacy. *Computer Knowledge and Technology* 2021; **17**(30): 210–212.
4. Li J, Lu L, Wu J, *et al.* Gu Fangzhou: Whole Life Devoted Unselfishly to Fighting Polio. *International Journal of Virology* 2019; **26**(4): 217–218.
5. Zuo KL, Huang JL, Sun B, *et al.* “People’s Scientist” Gu Fangzhou: A Pioneer of Polio Eradication in China. *Science & Technology Review* 2024; **42**(19): 119–127.
6. Wu J, Dong D, Li Y. Just for Chinese People’s Stood Up—Prof. Fangzhou Gu, Father of “Sugar Pills”. *Protein Cell* 2020; **11**(4): 231–234.
7. Chen L, Hendalianpour A, Feylizadeh MR, *et al.* Factors Affecting the Use of Blockchain Technology in Humanitarian Supply Chain: A Novel Fuzzy Large-Scale Group-DEMATEL. *Group Decision and Negotiation* 2023; **32**(2): 359–394.
8. Gao J, Zhang W, Yang C, *et al.* Comparative Study on International Research Hotspots and National-Level Policy Keywords of Dynamic Disaster Monitoring and Early Warning in China (2000–2021). *International Journal of Environmental Research and Public Health* 2022; **19**(22): 15107.
9. Han B. *A Research on Spatialtemporal Characteristics of Pre-Hospital Care and First-Aid Station Layout Based on Multi-source Big Data—Taking Nanjing City as Example*; Southeast University: Nanjing, China, 2022.
10. Yang LJ, Zheng JC, Huang G, *et al.* Emergency Rescue System for Public Health Emergencies in China. *Strategic Study of CAE* 2021; **23**(05): 9–17.
11. Li XF. Preliminary Study on “Quadruple Response Mode” for External Disaster Relief of China. *City and Disaster Reduction* 2023; **(05)**: 1–5.
12. Zhang D, Zhang L, Gong A. Development of Disaster Nursing in China: From the Spirit of Nightingale to COVID-19. *Disaster Medicine and Public Health Preparedness* 2021; **15**(2): e32–e35.
13. Gao Y. *Optimized Decision Making and Computational Analysis of Emergency Supplies Deployment Inuncertain Environments*; Beijing University of Chemical Technology: Beijing, China, 2024.
14. Zou K, Liu GJ, Li YP, *et al.* Risk Factors for Death and Injuries in Earthquakes: A Systematic Review. *Chinese Journal of Evidence-Based Medicine* 2008; **(07)**: 477–482.
15. Hou SK, Lv Q, Ding H, *et al.* Disaster Medicine in China: Present and Future. *Disaster Medicine and Public Health Preparedness* 2018; **12**(2): 157–165.
16. Zou SQ. Discussion on the Practice of Diploma Education in China Disaster Medicine. *Chinese Journal of Disaster Medicine* 2014; **2**(02): 64–66.
17. Fu XB. Military Medicine in China: Old Topic, New Concept. *Military Medical Research* 2014; **1**(1): 2.
18. Wang ZQ, Zhang XJ. Changes in China’s Emergency Management in the Past Forty Years of Reform and Opening up:

- The Analysis of Punctuated Equilibrium Theory. *Journal of South China University of Technology (Social Science Edition)* 2018; **20(06)**: 70–79.
19. Sun GX, Chen HY, Shao Q, *et al.* Status quo of China International Emergency Medical Team (Shanghai). *Chinese Journal of Disaster Medicine* 2018; **6(07)**: 398–401.
 20. Lao WD. China International Emergency Medical Team (Guangdong). *Chinese Journal of Disaster Medicine* 2018; **6(07)**: 421.
 21. Hu H, Yan H, Zhao X, *et al.* Construction of China International Emergency Medical Team (Sichuan): Exploration and analysis. *Chinese Journal of Disaster Medicine* 2018; **6(12)**: 696–699.
 22. Wang H. Research and Reflections on the Informatization Construction of the Emergency Medical Rescue System. *Occupational Health and Emergency Rescue* 2024; **42(05)**: 644–648+698.
 23. Zhou W, Sun JK, Wang XF, *et al.* Problem Analysis and Policy Choice of Long-Term Care Policy for the Elderly in China. *Health Economics Research* 2021; **38(05)**: 39–41+44.
 24. Zhan LY. *A Cross-sectional Survey of the Establishment of Geriatric Nursing Course in Colleges and Universities in Zhejiang*; Hangzhou Normal University: Hangzhou, China, 2015.
 25. Lai WD, Bai P, Liu B, *et al.* Construction of Elderly Health Service Professional Group. *Policy & Scientific Consult* 2023; **(03)**: 68–70.
 26. Dai XL. Increasing Pension Accumulation to Improve Pension Security Capability. *China Finance* 2025; **(10)**: 12–13.
 27. Zheng YB. *Design of Safety Monitor for Elderly Sanitary Ware Based on Azure Kinect*; Shandong University: Jinan, China, 2021.
 28. Qin DH, Li XH, Qin JM. Research on the Primary Medical Security System Based on Population Aging and Family Miniaturization. *Journal of Community Medicine* 2015; **13(15)**: 58–63.
 29. The Editorial Office. Collection of Proposals and Suggestions from NPC and CPPCC Representatives on Civil Affairs. *China Civil Affairs* 2017; **(06)**: 24–41.
 30. Yue B. Thoughts on the Transformation from a General Hospital to a Rehabilitation Hospital. *Shanxi Medical Journal* 2019; **48(23)**: 2974–2976.
 31. Ji W. How to Meet the Demand for Elderly Health Services in the Era of “Silver hair”? *Workers' Daily*, 11 November 2024.
 32. Long JF, Ding F, Wu XQ, *et al.* The Current Situation and Influencing Factors of Geriatric Care Ability of 9767 Clinical Nurses in Chongqing. *Chinese Nursing Research* 2024; **38(17)**: 3009–3017.
 33. Zhao Y, Gao RY. Research on Long-Term Care Insurance from the Perspective of Policy Change. In Proceedings of the 2024 China International Conference on Insurance and Risk Management, Ningbo, China, 17–20 July 2024.
 34. Liu Y, Jiang H, Qian X. Selection of Core Training Content for South-South Cooperation on Maternal and Child Health between China and Africa. *Health Development and Policy Research* 2021; **24(03)**: 334–338.
 35. Li L. We Will Adhere to the Path of Health and Health Development with Chinese Characteristics. *Chinese Cadres Tribune* 2025; **(07)**: 12–16.
 36. Feng B, Liu RH. Measures and Experiences of Ancylostomiasis Control under the Leadership of the Communist Party of China in the Early Period of the Founding of the People's Republic of China: A Case Study in Sichuan Province. *Archives* 2025; **(01)**: 34–43.
 37. Luo M. A Historical Investigation and Practical Implications of Mao Zedong's Promotion of the “Barefoot Doctors” Experience. *Journal of Zhangjiakou Vocational and Technical College* 2025; **38(01)**: 8–11.
 38. Chen YS. The Global Responsibility and Commitment of Chinese-style Modernization: Taking the Building of a Community of Health for All as an Example. *Theory and Review* 2025; **(03)**: 46–55.
 39. Ning FJ. *Study on Health Care History in China and the U.S: The Role of Government in 100 Years in the Field of Health Care*; Central University of Finance and Economics: Beijing, China, 2016.
 40. Ma W, Shen WW, Yan QQ, *et al.* Analysis and Discussion on the Status Quo of National Immunization Program in China. *Chinese Journal of Modern Applied Pharmacy* 2025; **42(14)**: 2465–2471.
 41. Pan F. Vaccination is the Most Cost-Effective Way to Prevent and Control Infectious Diseases. *China Modern Medicine* 2024; **31(14)**: 1–3.
 42. Xing WB, Zhang YL. Crisis and Intervention: The Evolution of Fiscal Governance Ideason the Prevention and Control of Infectious Diseases. *Fiscal Science* 2025; **(04)**: 79–91.
 43. Shao JH, Hu B, Ren XM, *et al.* Exploration on Training Strategies for Preventive Medicine Personnel Based on Post Competency in the Perspective of Public Health in the New Era. *Health Vocational Education* 2024; **42(22)**: 142–145.
 44. Shi RH. Development History and Promotion path of China's Health Governance Modernization. *Study & Exploration* 2024; **(05)**: 132–141.
 45. Hong RT, Wu SG, Qun Li, *et al.* Current Status and Outlook of Communicable Disease Surveillance in the Mainland of China. *Disease Surveillance* 2015; **30(12)**: 994–1001.

46. Gao H, Zhong W, Li L, *et al.* Thoughts and Suggestions on the Development of China's Infectious Disease Surveillance System Under the New Situation. *Chinese Hospital Management* 2020; 40(07): 54–55.
47. Hu XX. Basic Public Health Services: Development Process, Problems and Countermeasures. *Chinese Rural Health Service Administration* 2025; **45(06)**: 406–411+443.
48. He J, Huang XH, Tian SF, *et al.* The Application of Ideological and Political Teaching in Internal Medicine. *Chinese Medicine Modern Distance Education of China* 2024; **22(22)**: 18–20.
49. Liang GL, Liu JF, Li HH. The Era Value, Dilemma and Solution Strategy of Health Education in Colleges and Universities under the Healthy China Strategy. *Journal of Guangdong Polytechnic Normal University* 2025; **46(03)**: 65–70.
50. Li YL. Give Full Play to the Fundamental Role in Safeguarding the Health of Urban and Rural Residents and Do a Good Job in Basic Public Health Services. *China Health Human Resources* 2024; **(11)**: 6–7.
51. Li W. The Per Capita Government Subsidy for Basic Public Health Services Will Reach 99 Yuan by 2025, and the Services Will Be Further Optimized. *China Health Human Resources* 2025; **(08)**: 4.
52. Su M, Zhao WF, Li ZR. Study on the Construction of Prediction Model and Its Influencing Factors of Health Inequality among Residents—Evidence Based on Machine Learning. *Health Economics Research* 2025; **42(07)**: 23–29+35.
53. Wang XQ. *Effect of Advanced Outdoor Physical Activity on Children's Physical Health—Take Danyang Yuyang Kindergarten as an Example*; Yangzhou University: Yangzhou, China, 2025.
54. Guo XW. New Standards and Guarantees Have Been Established for Elderly Care. *China Health* 2019; **(10)**: 100.