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Primary health reforms in China since the New Healthcare Reform: Policy, Practice, and Progress

Lifang Zhang[1], Alec Morton[2], Jiangmei Qin[1], Chunmei Lin[1], Yue Xiao*[1], Yanchun Zhang*[1]

[1] China National Health Development Research Center, Beijing, China
[2] Strathclyde Business School University of Strathclyde, Glasgow UK

* Corresponding authors

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ABSTRACT

In 2009, China launched a new round of radical healthcare system reforms, with primary health as a key area. Great progress and good outcomes have been made in promoting primary health which have helped to form the typical model and experience of primary health in China in its current development stage. Based on literature analysis and case study, this paper reviewed the history of primary health care in China since the latest round of healthcare system reforms, summarized the practices and outcomes of initiating institutional reforms, enhancing health capacity, improving care delivery, and building the system, so as to provide some experiences for the international comparison. In the face of the new situation of population aging and changes in the spectrum of diseases, China's primary health care is still facing problems and challenges such as unbalanced development, weak service capacity, weak talent team, and the lack of a hierarchical diagnosis and treatment system. Considering the actual situation of primary health in China and looking ahead, next step five areas need be reinforced.

Keywords: Primary health care; Effectiveness; China

Introduction

From the concept of primary health care (PHC) proposed in the 1978 Alma-Ata Declaration to the commitment of the Astana Declaration in 2018, PHC has been identified as the key to the attainment of the goal of Health for All, and it remains the most cost-effective way to address comprehensive health needs close to people's homes and communities. Progress towards Universal Health Coverage (UHC) depends on a strong PHC system. China has pioneered in building PHC system in the past 4 decades,[1] and its barefoot doctor program initiated around 1970 has served as a model and inspired the Alma-Ata Declaration. As a large country with diversified local contexts, how China has achieved progress in strengthening its PHC system holds many instructive lessons for low and middle income countries as they chart their own development pathway.

Since 1950s, the Chinese government has created a three-tier healthcare service system, barefoot doctors, cooperative medical scheme, and the health system combining traditional Chinese medicine with Western medicine, which was hailed by the World Health Organization(WHO) and the World Bank as the "China Model" for "maximizing health benefits with minimal investment".[2] However, with the initiation of the reform and opening period in 1978, China started the transition from a planned economy to a market economy. Under the influence of market-oriented reforms, health care institutions were gradually privatized, and the functioning of health care services were weakened by overreliance by providers on revenues from sales of medicines,[3] together with the gradual disintegration of the cooperative medical scheme. Inaccessibility and unaffordability of healthcare services became a major social concern.

As a result of these developments, in March 2009, the Central Committee of the Communist Party of China and the State Council issued the policy paper *Opinions on Deepening the Reform of the Medical and Health Care System*, launching a new round of health system reforms, known as the New Healthcare Reforms, with a clear commitment to achieving UHC covering all the urban and rural residents, and to providing easy access to safe, effective, and affordable care.

The New Healthcare Reforms, sticking to the principle of 'ensuring essential healthcare, strengthening community health service and building up health institutions defined the public welfare and service functions of the PHC institutions,[4] strengthened the infrastructure and network layout, improved service capacity and quality, established sound system and mechanism, and transformed the service model, so as to promote the work of PHC in a positive and effective way contextualized to the Chinese situation. This paper analyzes the development history and innovative practices of the PHC in China since the New Healthcare Reform through review of key policy documents, and discusses future work considering the challenges faced in the new development stage.

Study design

The study applied descriptive approach mainly using case studies and secondary data analysis. By reviewing policy documents and analyzing a series of typical local pilots, the authors described the main strategy and mechanisms employed by the Chinese government in strengthening PHC. Data and information were mainly taken from the monitoring and evaluation reports delivered to the national health authorities, which have been prepared by the authors China National Health Development Center (CNHDRC). As a national health thinktank with decades of experiences in researching on evidence and best practices in healthcare reforms, CNHDRC has been deeply involved in supporting the design, implementation and evaluation of many health programs and policies. Therefore, cases in the paper are mainly based on pilot studies conducted by CNHDRC. By visiting local pilots and collecting data through questionnaire and interviews, the authors gathered information about the local initiatives and their progress.

Study Results

1. DEVELOPMENT OF PHC SINCE THE NEW HEALTHCARE REFORM

Since the New Healthcare Reforms, the CPC Central Committee, the State Council and the National Health Commission have issued a series of policies to promote PHC in response to the needs that PHC has to address at different stages of development. In terms of policy analysis, the development of PHC has gone through three stages: the stage of system and mechanism reform, the stage of service capacity building and the stage of high-quality development. Details of the most important initiatives in each stage are provided in Table 1.

1.1 Stage of system and mechanism reform (2009 - 2014)

At the initial stage of the New Healthcare Reforms, the public welfare nature of PHC institutions and the functions of essential public health services were initially defined. The important task at this stage was to break the old funding mechanism of "covering the hospital expense with medicine sales", and establish a new mechanism for maintaining achieving public health and welfare targets, incentivizing medical staff, and guaranteeing sustainability.[5] As a result, an essential public health service program covering all population has been established to promote the equalization of essential public health services. The essential medicine list has been established to reduce irrational medicine use and increase the access to effective therapeutics. The comprehensive PHC reform was promoted to establish a long-term compensation mechanism, a competitive hiring mechanism and a salary distribution mechanism.

1.2 The stage of service capacity building (2015 - 2020)

In 2015, the establishment of a tiered healthcare delivery system was proposed in China, aiming to achieve greater efficiency and appropriateness in care delivery. The main elements of the tiered system are: to strengthen the gatekeeping function of the PHC, to build up the two-way referral mechanism, and to manage acute and chronic care separately. A basic public health service program has been established. PHC institutions provide residents with 17 basic public health services in 12 categories free of charge, such as health record keeping, antenatal care and childcare.

The important task at this stage was to "strengthen PHC". As a result, a series of capacity building activities, such as the "Quality Improvement Program" and building community hospitals were launched in China. The pilot work on integrated care delivery and coordinated care were launched to promote the accessibility of quality health care resources at PHC institutions. Family doctor contract services were promoted to improve the PHC and optimize care.

1.3 The stage of high-quality development (2021 -)

Under the goal of high quality economic and social development during the 14th Five-Year Plan period, the key task for PHC at this stage was to deepen the institutional reforms, to continuously build up the capacity, to innovate the service delivery, and to improve the health system. Therefore, the construction of comprehensive pilot zones was initiated to create a national benchmark for development of high-quality PHC through innovative reforms. The development of high-quality family doctor contracted service program was promoted by the central authorities. The construction of tightly-knit medical communities has gone from a pilot to a full-scale roll-out.

Table 1 Development of primary health care since the new healthcare reform

Stage of system and mechanism reform (2009 - 2014)	Stage of service capacity and content enhancement (2015 - 2020)	Stage of high-quality development (2021 - present)
2009: Start the establishment of the National Essential Drugs System, launch the National Basic Public Health Program, and implement the pay-for-performance policy.[6-8] **2010:**Propose the promotion of comprehensive PHC, including the compensation mechanism, personnel system, salary distribution mechanism, and drug supply mechanism.[9] **2013:** Consolidate and improve the Essential Drugs System and the new mechanism for PHC operation.[10]	**2015:** Promote the construction of a hierarchical diagnosis and treatment system, and improve the healthcare system with a focus on strengthening the PHC level.[11] **2016:** Establish the Party's new-era health policy of "focusing on the PHC"; and comprehensively promote the family doctor contract services.[12] **2018:** Launch the "Providing Quality Services to Communities" Activity.[13] **2019:** Launch the construction of community hospitals; construct pilots of medical communities in counties.[14]	**2021:** Select 12 counties (districts and cities) nationwide to carry out the construction of comprehensive PHC pilot zones.[15] **2021 - present:** Continue to promote the "Providing Quality Services to Communities" Activity and the construction of community hospitals. **2022:** Issue the Opinions on Promoting High-Quality Development of Family Doctor Contract Services.[16] **2023:** Promote the establishment of a high-quality and efficient PHC service system.[17] By the end of 2023, fully promote the construction of tightly-knit county medical communities.[18]

2. KEY PRACTICES

Reflecting the size of the country, China has a multi-level administrative geography. The administrative divisions are: provincial-level entities (1st level); prefecture-level entities (2nd level), county-level entities (3rd level), township-level entities (4th level) and village-level entities (5th level) with the county level historically having an important role in healthcare delivery and in financial risk pooling. China has always valued and implemented policy experimentation and rapid learning practices.[19,20] The *Regional Framework on the Future of Primary Health Care in the Western Pacific*, adopted by the WHO in 2023, proposed five strategic actions for the future of PHC, namely, (i) to establish appropriate service delivery models, (ii) to enhance the capacity of individuals and communities to participate, (iii) to build a diversified team , (iv) to improve the system of financing, and (v) to create an supportive environment.

Based on this regional framework, and taking the important tasks of PHC reform in China into account, we summarize the highlights and experiences of various regions in building county health care service systems, upgrading service capacity (including human resources development), innovating service models, and creating an environment for reforming PHC system and mechanism, to give a sense of the depth and diversity of the Chinese experience. We hope that our experiences can be a resource for other countries looking for solutions for their own problems.

2.1 Pilot based approach to PHC reforms

In 2016, the World Bank, the WHO and other institutions released a joint research report called *Deepening the Reform of the Medical and Health Care System in China to Establish a Value-Based Quality Service Delivery System*. The first recommendation for the healthcare reform in China was to "build a people-centered, integrated health care delivery system". The construction of the coordinated health community was achieved through building an integrated healthcare delivery at the county level.

In 2019, pilot projects for the construction of coordinated healthcare communities were launched in China. According to the official policy documents, they are usually led by county hospitals, joined by a few other county-level health care institutions, township hospitals, community health service centers, etc. We highlight *responsibility*, *management*, *service*, and *interest*, as the dimensions on which integration of the county healthcare system can be achieved in order to enhance service capacity.

2.1.1 Building communities of responsibility

In the construction of the coordinated care communities, the leading responsibility of the party committee and

government, the decision-making authority of the medical communities and the assessment and supervision responsibility of the relevant departments have been strengthened, and a management system with clear powers and responsibilities has been established. For example, in Anhui Province, a large province in central China with many poor rural counties, several initiatives were established to improve healthcare. These include a list of public health institutions, guidelines for the internal operation and management of healthcare communities, and a framework for comprehensive supervision of external governance. These measures clarify the government's responsibilities in planning, developing, and subsidizing the construction of medical communities, ensuring unified management of human and material resources within these communities, and maintaining accountability for their comprehensive supervision. This effort also delineates the boundaries of responsibilities between the government, medical communities, and the healthcare industry.[21]

2.1.2 Building communities of management

The unified management of administration, personnel, finance, business, medication, information, and logistics within the coordinated healthcare communities has been implemented to achieve effective integration and optimal allocation of medical and health care resources. For example, a county coordinated healthcare community in Shanxi province gradually abolished the administrative level of all medical and health institutions in the county through the “six types of unified management”, and give the local pilots "five powers”, such as the personnel management, salary allocation, financial management, PHC management, medical insurance and public health funds.[22]

2.1.3 Building communities of services

Continuity and coordination has been stressed in promoting tiered care delivery at the county level, with gatekeeping of community care providers, two-way referrals between secondary and primary care, care networking, and coordinated acute and chronic care. For example, the county coordinated healthcare community in Lu County of Sichuan Province, has opened a two-way referral pathway, clarified the referral conditions, and established a service channel where common diseases were handled in PHC. Complicated and severe diseases were referred to hospitals, and stabilized patients were referred to the PHC institutions.[23] Coordinated healthcare community around the world have generally established resource-sharing centers for remote consultation, imaging, electrocardiography, testing and examination, forming a shared medical model of “examination in PHC, diagnosis at the higher level, and mutual recognition of results”.

2.1.4 Building communities of interests

In terms of financing, the county level health communities are paid through global budget payment by the basic health insurance scheme, with strengthened performance assessment, and greater financial autonomy. The balance of the fund was regarded as the operational income, and reasonable sharing of the surplus was permitted, emphasizing the sharing and win-win situation of the economic interests of the member units within the healthcare communities. For example, since the implementation of the healthcare community in Suixi County of Anhui Province, a surplus was realized for six consecutive years. The balance of the fund in the county-township-village three-tier health care institutions was distributed with a ratio of 6:3:1, used for institutional construction, training of personnel, personnel incentives, etc., and to promote the common development of the various members and the enhancement of the effectiveness of the services.[24]

Since 2020, the National Health Commission has set up criteria for assessing the establishment of the four communities mentioned above, and established a reporting system for the monitoring and evaluation of the medical communities. Monitoring and evaluation have been conducted by CNHDRC researchers based on reporting data from the pilot sites, and annual results published and rankings of different localities released, which had an important impact on mobilizing the enthusiasm for reforms in different parts of the country and ensuring that the establishment of healthcare communities achieved the expected results.

2.2 Health service networking

In recent years, China has taken a variety of measures to improve the capacity and quality of PHC, including strengthening the role of lead hospitals in allocating resources to the lower-level health facilities, and providing technical support through the construction of healthcare communities; and building up infrastructure and expanding the scope of services through upgrading the capacity of PHC. The country has also improved the efficiency of the services with the help of information technology, such as internet medical service.

2.2.1 Healthcare communities empower the PHC

In many places, the leading hospital in the healthcare community is encouraged to provides extra resources and technical assistance to the local PHC institutions. Common practices include sending staff to receive hospital-based training, dispatching hospital staff with equipment to work temporarily in PHC institutions, launching new specialties and wards with joint efforts of health facilities at different levels, and sending clinicians in hospital to join the family doctor contract service team. For example, the township health centers sent many staff to the central county hospitals for further training and study in Zhejiang Province in 2023, nearly 40,000 persons in total.[25] Since joining the healthcare communities for five years in 2018, Hugang Township Health Center in Dancheng County of Henan Province, has accumulated more than 60 new technologies and interventions, and the volume of business has increased by nearly four times through the long-term assignment of experts from county hospitals to help and discipline development.[26]

2.2.2 Intensive capacity building

In recent years, in accordance with the basic standards for community hospitals and the standards for the construction of rural regional health centers set at the provincial or national level, community hospitals have been constructed in cities to serve community health service centers, and rural regional health centers have been constructed in rural areas to serve township health centers. The aim of these new hub institutions is to provide additional service capacity and to play the role of a pivotal point between regional medical treatment

combination and countywide medical communities. At the same time, in accordance with the standards and evaluation guidelines for the service capacity of township health centers and community health centers, infrastructure was improved, clinical departments were quality-assured, medical quality and safety were strengthened, and appropriate personnel were cultivated and trained, so that the overall capacity of PHC was upgraded. For example, Jiangsu Province was the first province in China to carry out the construction of community hospitals, rural regional medical centers, and primary specialties. Indeed, its overall PHC capacity was among the highest in China, with its standards and assessment experience incorporated into relevant national documents for promotion as an exemplar to the whole country.

2.2.3 Human resource development

China continued to strengthen the cultivation and training of PHC personnel (including rural doctors) through a variety of means, including the standardized training of residents in general practice, the training of assistant general practitioners, free training for rural orientation training, and job-transfer training. From 2010 to 2021, China has invested a total of nearly 2.1 billion yuan to support central and western provinces in training more than 70,000 rural order-oriented medical students at the undergraduate level. Since 2018, about 5,000 general practitioners who have passed the "5+3" training have been provided to work at the PHC institutions every year.[27] For example, many provinces, such as Henan and Hunan, have considered the local situations and increased their efforts to train talents in short supply in general practice, pediatrics, traditional Chinese medicine and rehabilitation, and have gradually expanded the scale of free training for medical students dispatched to rural areas to meet the demand for PHC.

2.2.4 Digital transformation

After years of development, health informatization at PHC in China has made significant breakthroughs in many aspects, such as system construction, interconnection, and application effects. By the end of 2020, all 31 provinces nationwide have built PHC information systems and developed business functions, such as basic public health services, basic medical services, family doctor contract services, telemedicine. For example, the provinces of Jilin and Guizhou have also established regional health information platforms covering provinces, cities, counties, townships, and villages to realize the interconnection and resource-sharing of health information across the province. Zhejiang Province promoted the application of the Internet in PHC, playing an important role in the management of chronic diseases, contracting of family doctors, distribution of medicines, and providing access to electronic health records for patients.

2.3 Family doctor contract services and tightly knit care

The experience of UHC countries (such as the United Kingdom),[28] has been put family doctors serve as the gatekeepers of the health system and provided continuity of care to the people by establishing a long-term and stable contractual relationship with them. In recent years, China has utilized the expansions in six areas to promote the high-quality development of family doctor contract services based on the previous contracting services, and at the same time has used the family doctor contracting services to innovate the medical and preventive integration model of chronic disease management at the PHC level.

2.3.1 Focus on quality development of family doctor contract services

In response to the problems of insufficient supply , limited service content, and one-year contract methods, China issued the *Opinions on Promoting High-Quality Development of Family Doctor Contract Services* in 2022, proposing a pathway of "six expansions". That was to say, expanding from general practice to specialties, from PHC institutions to secondary and tertiary hospitals, from public to private health care institutions, from team signing to individual doctor signing, from the fixed period (1 year) to a flexible one, and from management of chronic diseases to co-management of chronic diseases and infectious diseases. For example, Zhejiang Province required all county medical community lead hospitals to dispatch specialists at the PHC level to serve as family doctors. Jiangsu Province has built about 2,000 family doctor studios, where residents can sign directly with a family doctor and explore contract service packages with flexible deadlines.

2.3.2 Exploring coordination or integration of health service and preventive care

A lesson from the prevention and control of COVID-19 was the need to strengthen coordination and integration of curative and preventive care, focusing on collaboration between health care providers and specialized public health agencies. Care integration was based on the synergy of curative and preventive care, which further required the effective integration and convergence of medical and public health service systems, and the construction of an integrated health service model that covered the entire population and the entire life cycle. For example, in Zhejiang Province, a public health guidance service team was formed by the CDC and maternal and child health institutions. From within this team a public health commissioner was identified as a leader and a commercial lead as a liaison, and the public health management center of the medical community was assigned as the collaboration hub.[29] Chongqing Municipality promoted the "Five in one" integration of medical and public health in the management, team, service, performance, and information in the medical community.[30]

2.4 Deepening the system and mechanism reform and create a policy environment that empowers the development of PHC

In recent years, China has continued to deepen the system and mechanism reform, increasing financial input, improving medical insurance policy, and improving the personnel and remuneration system, to create a favorable policy environment for promoting the sustainable development of PHC.

2.4.1 Improving financial compensation mechanisms

Based on clarifying the public welfare status of PHC institutions, the government has strengthened its financial responsibilities for capital construction funds, equipment acquisition funds, personnel funds and operational funds for the public health services. For example, Guangdong

Province was the first province in China to put forward the idea of "financing PHC institutes as class I public welfare institutions".[31] Zhejiang Province has also explored the compensation mechanism according to standardization of workload.

2.4.2 Strengthen the coordination of health insurance policies

In respect of outpatient and inpatient care, PHC institutions have been given favorably different health insurance payment policies, such as lowering the deductible and raising the reimbursement rate and ceiling. The health insurance payment policy in the healthcare Communities were improved, to explore the mechanism of global budget payment, balance retention and reasonable sharing of overspending of the health insurance fund. Steady progress has been made in paying county hospitals on a DRG (Diagnosis Related Groups) or DIP (Diagnosis-Intervention Package) basis. For example, in Suixi County of Anhui Province, based on the global budget "big bundle" payment for the healthcare community, the small bundle payment for 41 chronic disease management has also been explored, that was, the payment for basic outpatient and inpatient care has been given to the township health centers on a per capita basis (3,700 yuan per person per year). The balance of funds was allocated to county hospitals, township health centers, and village clinics in accordance with the ratio of 4:4:2.[24]

2.4.3 Improve the mechanism for attracting and employing health talents

Regarding the problem of failing to attract and retain staff, the integration of county health care personnel configuration and management was strengthened, supporting the more fluid movement of staff between higher and lower administrative levels, to establish a sound mechanism for two-way flow of talents. Recently, China has provided the staff registry entry for college graduated students working as rural doctors, i.e., college graduated students working as rural doctors who have been trained through a special program since 2020 would be given staffing guarantees in public institutions, with personnel funds would be allocated from the treasury. For example, in Chongqing Municipality, doctors newly recruited by county hospitals or doctors without PHC working experience must work in township health centers for one year, i.e., "employed at county level for working in a town"; personnel of village clinics were employed as staff of township health centers, and enjoyed the relevant guarantees of the township health centers.[32]

2.4.4 Improving the payment and guarantee mechanism

Based on the implementation of pay-for-performance for PHC, China has implemented the "two permissions", namely, allowing health care organizations to break through the current level of payment regulation for public institutions, and allowing health care service revenues to be used primarily for staff incentives after costs have been deducted and funds extracted in accordance with the provisions of the law. Suixi County of Anhui Province allowed PHC institutions to use 55% of their revenue and expenditure balances for staff incentives. Shanghai, Hangzhou, Xiamen, etc., set up a family doctor contract service fee (120 yuan per capita), allowing 70% of the balance used for the allocation of family doctors after the deduction of costs, which was not counted in the total amount of performance pay. Many places, such as Hunan and Hainan, have also established allowances for general practitioners, allowances for impoverished areas and allowances for remote areas.[32]

3. ACHIEVEMENTS

3.3.1 The network system of PHC covering both urban and rural areas has been constantly improved

The number of PHC institutions nationwide has increased from 882,000 in 2009 to 980,000 in 2022, a total increase of 98,000, of which there were 36,000 community health service centers (stations), 34,000 health centers, and 588,000 village clinics[33]. It has basically guaranteed that there is at least one community health service center in each street, one health center in each township, and one village clinic in each administrative village. With the advancement of urbanization and the reduction in the size of the rural population, the layout of PHC institutions has been gradually adjusted, with urban community health service institutions increasing and rural medical and health care institutions decreasing year by year, and with an emphasis on the use of new digital health technologies to achieve a shift from full coverage of institutions to full coverage of services.

3.3.2 The PHC workforce has been further strengthened

The number of PHC personnel nationwide has increased from 3,152,000 in 2009 to 4,551,000 in 2022 , a total increase of 1,399,000, of which the number of PHC personnel per 1,000 population has reached 3.22, and the number of general practitioners per 10,000 population has reached 3.28.[33] With the full implementation of the construction of tightly knit county healthcare communities, China has required county hospitals to increase the number of personnel assigned to health centers to achieve full coverage of health center assignments, and the assignment cycle of each person cannot be less than six months. In 2022, the practicing (assistant) physicians in community health centers and township health centers with bachelor's degree or above accounted for 58.8% and 33.6%, respectively, an increase of 28.1 percentage points and 24.8 percentage points compared with those in 2009. The quality of PHC talents has thus been continuously improved.

3.3.3 The capacity and content of PHC has been constantly improved

The delivery capacity of PHC institutions has been continuously improved. From 2019 to 2022, the number of community hospitals built increased from 603 to 3,821, of which the proportion of institutions with "≥5 clinical specialty departments" increased from 78.0% to 96.1%. The configuration rate of color ultrasound, automatic biochemistry, DR, and CT reached 96%, 94%, 93%, and 52%,[30] an increase of 13, 14, 15, and 42 percentage points, respectively. In 2022, more than 68.0% of community health service center/township health centers met the national service capacity standard of "Providing Quality Services to Communities".

Further, the essential public health service package has been steadily advanced and the family doctor contract

services have been continuously optimized. From 2009 to 2022, the coverage of the program was expanded from 9 categories to 12 categories and 17 major public health service items. The per capita financial subsidy was increased from 15 yuan to 84 yuan, and the number of patients with hypertension under management increased from 14.8 million to 112.36 million, and the number of patients with diabetes mellitus under management increased from 4.64 million to 37.92 million.[34] By 2022, 441,000 family doctor teams have been formed nationwide, realizing 80.1% coverage of key populations.[33] In addition to providing basic medical and basic public health services, family doctor teams also provided health assessment, rehabilitation guidance, home health care services, home nursing, traditional Chinese medicine, remote health monitoring and other services through the development of personalized contract service packages.

3.3.4 The system and mechanism reform has been deepened

System and mechanism reform has advanced at multiple levels in the system, at the operational delivery level, at the level of governance, and critically, with respect to personnel management which has been a critical problem in the system.

At the operational level, the tightly knit county healthcare communities have implemented the uniform management of administration, personnel, finance, operations, performance, and medicines, and have promoted the gradual formation of a management system that integrated the county and township as well as the township and the village.

From a governance point of view, a long-term and stable financial compensation mechanism has been established. Governments at all levels have taken the investment responsibility for class 1 public institutions, guaranteeing funding for infrastructure construction, human resources, and basic public health services, and promoting the sustainable development of PHC institutions.

Finally, the personnel and allocation system were improved. The personnel attraction and allocation in PHC has been improved through the implementation of measures such as staff employed by township centers working in a village clinic", and "establishing a human resource pool". It has also upgraded the salary level by allowing the surplus of income and expenditure of primary health care institutions to be used for distribution, and by excluding the fees for contract services and allowances for family doctors from the total amount of performance pay. According to the Health Financial Yearbook analysis, the per capita payroll for community health care personnel in 2021 was three times what it was in 2009.

4. CHALLENGES AND NEXT STEPS

4.1 Challenges

As many other countries in the world, China is seeing a rapidly ageing population, and increasing disease burdens of chronic diseases such as cancer, diabetes and heart diseases. These problems are also exacerbated by lifestyles, including high-risk behaviors such as smoking and sedentary living, alcohol consumption, and environmental factors such as air pollution. At the same time, with economic development and rising income, the population are demanding more quality health care services. In this situation, PHC in China faces four major challenges.[35]

First, the problem of imbalance and inadequacy in the development of PHC remains prominent, with large differences between urban and rural areas, and between eastern, central, and western regions, in terms of infrastructure development, service capacity enhancement, and the deployment of human resources, as well as inconsistencies in the process of system and mechanism reform.

Second, the capacity of PHC is still weak, and the phenomenon of residents flowing to large cities and hospitals for medical treatment is still common. With the aging of the population and the high incidence of chronic diseases, the capacity and mode of integrated management of "prevention, treatment and rehabilitation" in PHC institutions must continue to be upgraded and optimized.

Third, the staffing issue remains a barrier to the development of PHC. As a result of the wide gap between urban and rural areas in terms of levels of economic development, wages and incomes, levels of education for children, and career development environments, the proportion of new health talents flowing to PHC institutions over the past 10 years has remained relatively low, and the challenge of recruiting and retaining personnel has remained prominent.

Fourth, the health service integration remains a work in progress. Some pilot regions have accumulated reform experience in promoting the establishment of the integrated health care service systems in counties (districts) with the help of healthcare communities. However, most regions have not yet established high-quality and efficient integrated health care service systems, and the system and mechanism reform involving the relationship of interests has yet to be pushed forward.

4.2 Next steps

Considering the actual situation of PHC in China and looking ahead, the following five areas need attention.

First, the Government's role in planning, financing and policy promotion should be strengthened through the National Health Commission, a cross-sectoral and cross-disciplinary coordination mechanism should be established, the participation of communities and individual families should be expanded, and the "primary-health-care-oriented" approach to health care in the new era should be actively implemented.

Second, the construction of tightly-knit county healthcare communities should be comprehensively promoted, to reshape the health care system, and optimize the health care resources, promote the integration of service provision at the county, township and village levels, and to build a high-quality and efficient integrated health care service system.

Third, the provision of high-quality medical resources to the PHC institutions should be promoted, making use of

digital health technologies and other means to continuously upgrade the capacity, strengthening the integration of treatment and prevention, and perfecting the combination of medical treatment and endowment, to further satisfy the diversified, personalized and nearby service needs of the public.

Fourth, the pool of personnel should be continuously developed and expanded, to increase the number of personnel to be trained, innovate the mechanism for the use of personnel, and further improve the remuneration system and enhance remuneration packages.

Fifth, the summarization and evaluation of typical experiences should be strengthened, to promote the typical experiences of pilot regions through various means, such as exchange meetings and new media reports, so that other regions can learn from them and gradually narrow the gap in PHC reform and development.

5. Conclusions

This paper described the PHC reforms and development in China from a historical point of view. The main strategy and mechanisms taken by the Chinese government have been analyzed and elaborated through extracting experiences and practices of the typical local pilots.

As the world continues its journey to UHC, China can offer learnings about its approach to the achieving UHC through building strong PHC. China's pilot-based approach to PHC development with a strong government leadership is key to facilitate rapid learning and rollout of best practices and models. This characteristic experiment-based policy learning is well-suited to a country with a large population and great regional diversities. The government used monitoring and evaluation to lead this deliberative learning process and supported feedback and sharing of knowledge. Pilot-based experiment and roll-out, monitoring and evaluation, experience summary and promotion of key learnings were important tools used by the country in implementing PHC reforms.

Moreover, China's current reforms are focusing on improving the accessibility and quality of PHC. Instead of just using single program or project, the Chinese government has implemented combined initiatives to achieve this target, such as increasing human resource and improving the capacity of the family doctors, and employing digital tools to make service accessible. Such a multi-strategy approach is helpful for implementing reforms. Also, building a people-centered integrated PHC is an important goal for UHC. To achieve this goal, the capable county hospitals, or even city hospitals should be engaged in supplying technical resources and providing continuous capacity building support.

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