

**PROGRAM-FOR-RESULTS INFORMATION DOCUMENT (PID)
APPRAISAL STAGE**

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I. Country/Province, Sectoral and Institutional Context

China has achieved impressive results in the health sector

1. *China has made impressive gains in improving overall health outcomes in past decades, along with its rapid economic development.* After three decades of double-digit economic growth, China has successfully lifted over 700 million¹ people out of poverty, and has significantly improved the health status of its citizens. Higher incomes, lower poverty and better living standards, combined with China’s early promotion of primary care and public health, introduction of barefoot doctors for rural villages, community based health insurance, and ambitious public health campaigns, resulted in significant declines in mortality and an unprecedented increase in life expectancy (Yang et al. 2008, Caldwell 1986). The infant mortality rate dropped from 52.9 per thousand births to 8.1, and the maternal mortality rate decreased from 97 per 100,000 to 21 between 1990 and 2015. A child born in China today can expect to live more than 30 years longer than his forebears half a century ago; it took rich countries twice that span of time to achieve the same gains (Deaton 2013).
2. *These gains were buttressed by major reforms in the health sector.* In 2009, China unveiled an ambitious national health care reform program with the goal of providing affordable, equitable and effective health care for all by 2020. The government defined comprehensive reforms in five priority areas - basic health insurance, health service delivery at grassroots level, essential public health service, an essential drugs program, and public hospital reform. After seven years of implementation, China has achieved

¹ http://www.stats.gov.cn/tjsj/sjjd/201510/t20151016_1257098.html

near universal health insurance (HI) coverage at a speed that has few precedents globally or historically. As a result of significant investments in health infrastructure, the hospital bed capacity increased rapidly from 2.27 million to 5.33 million between 2003 and 2015, service capacity has been strengthened, utilization of health services has risen and out-of-pocket (OOP) spending as share of total health expenditures has started to fall, leading to a more equitable access to care and greater affordability. The essential drugs program is improving access to effective drugs. Finally, the reform also spearheaded innovative pilots in health financing and service delivery at the local level in many locations.

3. ***Despite the impressive progress of these reforms, new sectoral challenges are emerging.*** The population of China is aging at an unprecedented rate given improvements in life expectancy and the consequences of the One Child policy. According to the World Population Prospects, by 2030, the proportion of senior citizens above 65 will increase by about one fourth, and by 2050, the aged will account for about a quarter of the overall population. At the same time, the increasing burden of non-communicable diseases (NCDs), especially hypertension and diabetes, imposes great challenges on the Chinese health system. NCDs are already China's number one health threat, accounting for over 80 percent of the 10.3 million premature deaths annually, and 77 percent of Disability Adjusted Life Years (DALYs) lost² in 2010. Moreover, more than 50 percent of NCD burden falls on the economically active population (ages 15-64), which may adversely affect the labor supply and compromise the quality of human capital. Risky behaviors, such as smoking, poor diets, sedentary lifestyles, and alcohol consumption, as well as environmental factors such as air pollution, are powerful forces behind the emergence of chronic illnesses in China.

China's health system is not well positioned to respond to these challenges.

4. ***China's current health system is hospital-centric, fragmented and volume-driven.*** Service delivery has a strong treatment bias, with an inadequate emphasis on population health outcomes. Service at primary care level is perceived by citizens as low quality, and people bypass the lower level facilities to seek treatment in hospitals late and at a high cost. As a consequence, utilization of hospital services has expanded rapidly from 4.7 percent in 2003 to 14.1 percent in 2013. Between 2002 and 2013, the number of tertiary and secondary hospitals increased by 82 and 29 percent, respectively, while there was a slight decline in the number of primary care providers (Xu and Meng 2015)³.
5. ***Perverse incentives have played a role in the rapid expansion of hospitals.*** Health insurance historically did not cover outpatient care, and hospitals were rewarded for production of services through a fee-for-service financing system. Both patients and hospitals were incentivized to produce and consume more, often unnecessary services,

² IHME 2010, WHO 2014.

³ Xu, Jin, and Qingyue Meng. 2015. People Centered Health Care: Towards a New Structure of Health Service Delivery in China. The World Bank. Washington, DC USA

driving up investment and recurrent cost, and sometimes endangering human life. China now has more hospital beds per capita than the USA, Canada or the UK, and hospital services account for 54 percent of China's total health expenditure compared to less than 10 percent for primary care. Average lengths of hospital stays, a key driver of costs, is high in China relative to OECD countries (9.8 days compared to 7.3 days). As a result, total spending on health increased fourteen-fold from the last two decades from about 220 billion yuan to 3,170 billion yuan in real terms, raising affordability and sustainability concerns. The trend is not likely to reverse in the near future, given the pent-up demand for health services (particularly with rising disposable incomes) and the changing epidemiological and demographic profiles in China, as well as the constantly evolving health technologies globally. The 2016 Joint Flagship Health Sector Study, entitled "Deepening Health Reform in China Building High Quality and Value-Based Service Delivery" concluded that business as usual, without reform, would result in growth of total health expenditure from 5.6 percent of GDP in 2015 to 9.1 percent in 2035, an average increase of 8.4 percent per year in real terms.

6. ***At the same time, human resource shortages and poor capacity at the grassroots have weakened the delivery of primary healthcare services.*** China faces a massive shortage of general practitioners (GPs) and nurses, and the PHC workforce has fallen from 40 percent of total workforce in 2009 to 36 percent in 2013. Integration of health services across provider tiers (e.g., tertiary, secondary and primary) and between preventive and curative services is weak. Providers at different levels have an incentive to compete with each other in order to maximize their revenues, rather than managing population health in a coordinated way and in a cost effective manner. Weak primary care systems, poor provider integration and a lack of gate keeping and screening systems have resulted in mortality due to NCDs in China being almost double that of Japan.
7. ***Quality of care is a significant issue in China's health system.*** Available evidence shows that many health professionals at the grassroots level lack the knowledge and skills needed to effectively diagnose and treat common conditions (Sylvia, et al., 2014; Wu, Luo et al, 2009). Although quality of care is considered better at secondary and tertiary hospitals, systematic evidence on whether care is provided according to best evidence or guidelines (process of care) and data on effects on the health of patients as a result of receiving care (outcome of care) is scarce. A recent study found significant variations in outcomes across tertiary hospitals (Xu et al., 2015). Over-prescription of drugs and treatment, especially antibiotics and intravenous treatments, is a problem in all facilities. The perverse incentives that encourage profit-making and increasing volume of care, instead of rewarding high quality care, affect behaviors of management and frontline service delivery at all facilities.
8. ***Finally, insufficient coordination among institutional actors is a major impediment to innovation and sustained reform implementation in the health sector.*** There are over ten government agencies involved in the decision-making and administration of the health sector, all the way down to the provincial and local level; each pursues its line ministry's core interests. Absence of a shared vision on the health reform thus constrains coordinated and coherent policy formulation and implementation.

The Central government has nominated Anhui and Fujian provinces for World Bank support

9. Anhui province is located in the central-eastern region in China and has 16 prefectures, 105 counties and a population of 69 million. Its per capita GDP in 2015 was 35,997 RMB, which places it in the 25th position out of the 31 mainland provinces of China. Fujian, located on the southeast coast of mainland China, has nine prefectures, one development zone, 85 counties/districts and a population of 38 million. Its per capita GDP in 2015 was 67,966 RMB, placing it in the seventh position nationally.
10. ***Mirroring the national context, the provinces of Anhui and Fujian have made significant progress on health outcomes but face the same sectoral challenges.*** The two provinces have made rapid strides on improving health outcomes. For instance, life expectancy at birth was more than 76 years in Anhui and 77 years in Fujian in 2015, compared to 72 in 2000. The Infant Mortality Rate (IMR) had also dropped to 4.54 and 4.64 per thousand live births, respectively in Anhui and Fujian in 2015, from 26.1 and 23, respectively in 1990. However, a rapidly aging society, an increasing burden of non-communicable diseases (NCDs), fast-rising health expenditures, and a sub-optimal healthcare delivery system are major challenges for the two provinces, much like the country as a whole.
11. ***These two provinces are “nationally designated health reform pilot provinces”.*** Both provinces have displayed solid political commitment and a willingness to pioneer innovative reforms tackling underlying systemic issues in health service delivery. Anhui has always been at the forefront of the 2009 health reforms, being the first province to implement the “zero mark-up” policy for drugs and primary health care reform at the grass-roots level. Anhui has launched an integrated delivery system (IDS) for health services, which amalgamates services at county, township and village level, and has introduced an innovative capitation payment system throughout this network. Sanming, an inland prefecture in Fujian province with a population of 2.3 million, started a public hospital reform in 2012, which has become a successful and highly regarded model. Within this pilot, the prefecture pioneered multidimensional innovations in governance, price scheme reform, drug procurement, human resource management, remuneration, and health insurance management. These provincial innovations have been identified by the national government as successful reform models to be further improved and scaled up in order to learn lessons that may be applied nationally. The two provinces were therefore nominated for World Bank support under the PforR with the goal of expanding, deepening and scaling up the successful reform pilots in these provinces.

II. Program Scope

12. ***Scope:*** The PforR will support over a five-year period (2017-2021) a subset of the Anhui and Fujian Governments’ health reform Masterplans across the two provinces in both urban and rural areas. The proposed PforR, thus, includes three reform areas (namely public hospital reform; a people centered integrated care (PCIC) service

delivery system with strengthened primary healthcare services, and cross-cutting systems relevant to hospitals and PCIC) derived from the first three priority areas of the provincial Masterplans, with associated disbursement-linked indicators (DLIs).

13. ***Disbursement against achievements:*** The PforR has eight Disbursement Linked Indicators (DLIs), which focus on measurable and achievable improvements in the efficiency and quality of health care services. The DLIs are expected to translate ultimately into better health outcomes and an improved quality of life for patients, reduced out-of-pocket expenditures, and improved patient satisfaction with the services being delivered at all levels of the health care systems.
14. ***Verification:*** The DLIs will be verified by an Independent Third Party that will be hired by the NHFPC. A sufficiently rigorous verification regime will be instituted. The health and family planning commissions at the provincial and county levels will review the report results from the public hospitals. The review activities include validating data sources and statistical methods, and checking the consistency of data from various sources, such as hospital registries and government health information systems. The verification agencies will do the final verification of the reported results and conduct on-site reviews of a sample of randomly selected health care facilities in the counties. Requests for payments will be made to the Bank based on the verified results of the DLIs.

PforR Beneficiaries

15. The most important beneficiaries of the reform are the populations of the two provinces, who will receive better care at lower costs. Other key beneficiaries include national level stakeholders, such as the Health and Finance Ministries; provincial health ministries; hospital managers and staff; and doctors, as well as other health professionals and para-professionals. Virtually all the beneficiaries are expected to benefit from the success of the PforR, and the PforR already has strong political commitment and support from the national government. Revenues lost by hospitals because of the GoC's "zero-markup" policy for drugs is being made up through increased central and provincial budgetary allocations. Reductions in the bonuses currently paid to doctors for the volume of services rendered and drug prescribed will be compensated by higher base salaries and bonuses linked to the quality of the services they deliver. The implementers thus have a strong incentive to implement the program well in order to deliver the anticipated results. The only party that may lose from the PforR's proposed activities are the middlemen involved in the pharmaceutical supply chain, who have to-date been benefiting unfairly from the high drug price mark-ups without adding significant value. Reductions in these mark-ups is therefore in the broader societal interest.

III. Program Development Objective(s)

16. The Program Development Objective (PDO) is to improve the quality of healthcare services and the efficiency of the healthcare delivery systems in Anhui and Fujian

provinces.

PDO Indicators:

- Proportion of hospital discharges paid through case-based payment for all county-level public general hospitals and Traditional Chinese Medicine (TCM) hospitals
- Proportion of inpatients to be treated through standardized clinical pathways at county level public general hospitals
- Proportion of outpatient care delivered by primary care facilities
- Number of prefectures that manage Type II diabetes patients using the integrated NCD service packages (Threshold value for a prefecture to qualify as using the integrated service package is 25% of total Type II diabetes cases)

IV. Environmental and Social Effects

17. The Environment and Social Systems Assessment (ESSA), prepared by the Bank team, provides a comprehensive review of relevant environmental and social management systems and procedures in China and the two provinces, identify the extent to which the country/local systems are consistent with PforR Bank Policy, and Directive, and recommend necessary actions to address potential gaps as well as opportunities to enhance performance during the Program implementation.
18. ***Environmental and Social Benefits:*** The PforR is expected to bring about positive environmental, social and health benefits in terms of providing improved health services to the public and communities, particularly in rural poor areas. Along with these, it is expected that standardized hospital management practices for medical waste, occupational safety and health, and that the collection and transportation of medical wastes in rural areas will be improved.
19. ***Environmental and social impacts and risks:*** Some of the activities supported under the PforR have potential negative impacts and risks. Medical waste management and radiation risks are considered the main issues from environment, health and safety perspective.
20. In healthcare facilities, the medical wastes are collected, packaged by medical workers and temporarily stored at designated places. A special unit (mostly the infectious prevention unit) is responsible for providing technical guidance and day-to-day supervision. The collection, transport and disposal of medical wastes are carried out by specialized companies in both provinces. In each prefecture, a medical disposal facility (incinerator) is in place to serve the prefecture and their disposal capacity is considered adequate but inadequate operation of disposal centers may produce air emissions bottom slag and fly ashes. The waste management can be compromised owing to low awareness or technical knowledge, inadequate equipment or storage capacity, or lack of supervision, considering that the PforR will aim to expand lower level healthcare facilities in townships, villages, some of them located in remote rural areas.
21. Radiation equipment including medical imaging and radiotherapy facilities are widely

used in county level hospitals and healthcare facilities. If not well managed, radiation and/or radiation contaminated materials (including paper, medical gloves, etc.) will be a great concern for the medical workers, public and community health and safety. In particular, if the healthcare facilities are located in core urban areas with dense population. In addition, the decommissioning of old radiation equipment is another concern if not done properly as they could be assessed by unregulated users.

22. The PforR includes upgrading, rehabilitation and/or new construction of healthcare facilities at the county level, township and village levels. The scale of the physical structure may range from small structures, such as test centers, to relatively large ones such as health recovery center or hospital in county seat (typically class II hospital). Potential environmental and social impacts associated with the construction of physical structures, and the operation of existing or new healthcare facilities, include: dust, noise, non-hazardous solid waste, wastewater, and social disturbance such as traffic safety and congestion, and construction safety concerns. These impacts are envisaged to be moderate, temporary, or site-specific and can be mitigated with readily available measures.
23. The main social issues considered during the assessment, include social risks, potential negative effects, and potential impacts of the Program, related to: (i) introduction of policy reforms; (ii) accessibility and equity; (iii) public participation; (iv) land acquisition and resettlement; and (v) ethnic minorities. The impact of land acquisition is usually the most relevant and predictable negative impact of such programs. Nevertheless, the overall impact of land acquisition under this PforR appears to be limited in scale and moderate in degree.
24. The ESSA concludes that in general the existing legal and regulatory framework of environmental, health and safety, and social in China and the two provinces are consistent with the Bank PforR Policy, and Directive. Nonetheless, it is anticipated that during implementation of the Program, certain risks exist due to shortcomings on capacity and enforcement particularly below county level and remote poor areas. Thus recommendations are made to address these risks during the implementation of the Program.
25. The overall environmental and social risk rating of this Program is considered Moderate.
26. ***Consultations and information disclosure:*** To carry out the ESSA, the World Bank team visited health care facilities of varying sizes and coverage in Anhui and Fujian, particularly county level hospitals and township level healthcare centers, as well as village clinics. Discussions were held with staff managing the facilities, including those in charge of construction, which provided good understanding of healthcare conditions in the two provinces. The team also consulted with representatives from two provincial PTFs, provincial environment protection and land resource departments, as well as officials from local government agencies on their regulations, practice and capacity.

27. **Fujian and Anhui redress:** Communities and individuals who believe that they are adversely affected as a result of this PforR may submit complaints to the grievance redress mechanism (GRM) of the Anhui and Fujian Health Bureaus.
28. **World Bank Grievance redress mechanism:** Communities and individuals who believe that they are adversely affected as a result of a Bank supported PforR operation, as defined by the applicable policy and procedures, may submit complaints to the existing program grievance redress mechanism or the World Bank’s Grievance Redress Service (GRS). The GRS ensures that complaints received are promptly reviewed in order to address pertinent concerns. Affected communities and individuals may submit their complaint to the World Bank’s independent Inspection Panel which determines whether harm occurred, or could occur, as a result of World Bank non-compliance with its policies and procedures. Complaints may be submitted at any time after concerns have been brought directly to the World Bank’s attention, and Bank Management has been given an opportunity to respond. For information on how to submit complaints to the World Bank’s corporate Grievance Redress Service (GRS), please visit <http://www.worldbank.org/GRS>. For information on how to submit complaints to the World Bank Inspection Panel, please visit www.inspectionpanel.org.

V. Financing

| Source | Amount (\$ million) | % of Total |
|-----------------------|---------------------|------------|
| Government | 7007 | 92.1 |
| IBRD/IDA | 600 | 7.9 |
| Total PforR Financing | 7607 | 100 |

VI. Program Institutional and Implementation Arrangements

29. The main stakeholders in implementation of the PforR are the Health and Family Planning Commission in each province and the State Council Health Reform Office (SCHRO) at the central level. Political commitment to the national health reforms is high and the support from the Bank through the PforR will help the participating provinces to achieve results by better aligning incentives to support results within the government’s own program and to achieve the PforR development objectives and defined indicators.
30. **Institutional Arrangement at the Provincial Level:** The PforR covers a part of the overall provincial health reform programs. The existing structures in the provinces will, therefore, be followed under the PforR. In each province, there is vertical structure for the health reforms that extends from the province to the prefectures and the counties.
31. **Institutional Arrangement at the Central Level:** The existing institutional

arrangements and capacity at the central level was assessed as adequate to implement the proposed PforR.

VII. Contact point

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