

“4+7” Drug procurement reform in China

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Abstract

On its way to UHC and a “Healthy China”, China is pursuing good value for health, and has launched national reforms on centralizing drug procurement. “4+7” drug procurement reform represents the national government’s latest ambitious attempt to contain drug costs by reducing prices and encouraging generic drug use and improving the availability of quality and cost-effective products. Following completion of the first and second stage—including selection of the drugs and national bidding for suppliers and promoting implementation in public hospitals—the reform shows initial success in driving huge price cuts and reshaping the quality-volume-price balance of the drug market. However, as the largest nationwide drug procurement reform, it is complex and will impact multiple actors, calling for more profound institutional changes and well-concerted coordination among government agencies. Although it is still too early to fully assess the results, the procurement reform has strong political commitment, wide involvement of key stakeholders, and huge potential market impact and will certainly shape the future of the Chinese drug market. Looking ahead, policymakers should consider HTA-informed drug selection and price negotiation, close coordination and cooperation of key policy stakeholders in enforcing implementation, and proactive policies and countermeasures for anticompetitive or monopolist behaviors.

1. Background

On its path to universal health coverage (UHC), China has launched radical health reforms to improve access and affordability of essential care dating back to 2009, including essential drugs and public health services. With massive investment in healthcare reforms, total health expenditure has increased rapidly with a double-digit growth rate exceeding that of the gross domestic product (GDP). Total drug spending more than doubled, growing from 754.38 Billion Yuan (110.45 Billion USD) in 2009 to 1820.3 billion Yuan (268.76 billion USD) in 2017, accounting for 34.42% of total health expenditure¹.

The focus of reforms has gradually shifted to align with the concept of value-based healthcare since 2012, in order to contain costs and better address various health needs. Supply and provision of essential drugs has been stressed as a key measure to address cost escalation. The main reforms launched included full coverage of essential drugs in the primary care setting, “Zero markup” for suppliers, pricing reforms, and centralized procurement. Although, the percentage of drug costs in the total health expenditure dropped from 40.63% in 2009 to 34.42% in 2017, overall achievement has been modest and multiple issues related to the supply and provision of truly cost-effective essential drugs remain.

Since 2001, reforms to centralize drug procurement reforms have been launched and expanded, alongside a series of national drug reform policies². These policies reflect the

¹ CNHDRC. *Abstract of China National Health Accounts*. 2018. Beijing.

² Main national policies issued: Draft Guideline of Centralized Drug Procurement in Health Facilities (Weiguicaifa [2001]308), Opinion of Standardizing the Centralized Drug Procurement in Health Facilities (Weiguicaifa [2009]7) & Appendix (Weiguicaifa [2009]59), Notice on the Issuance of the Centralized Drug

Chinese government's attempts to restructure the drug procurement process. The previous reforms on centralized drug procurement, mostly initiated by the provincial and national health authority, had stressed several aspects, namely the negotiation of lower prices in exchange for minimum procurement quantities, better planning of facility procurement, transparency of the procurement process, and accountability of drug delivery. However, due in part to misalignment or poor coordination of drug quality, pricing and payment policies, the high level of autonomy of the public hospitals, and the variable quality of generics (especially domestically produced ones), previous policies have achieved limited success.

Recent years have seen pioneering efforts around price negotiation and procurement initiated by public payers. Shanghai Municipality and Sanmin City (Fujian Province) are two outstanding examples, that have successfully implemented payer-oriented reforms.

Existing procurement challenges in the country are complicated by multiple transitions: the economic downturn, the strengthening of public service accountability, the epidemiological transition, the evolution of health systems organization, and deepening of health reforms designed to support the country in its journey towards UHC. Successful procurement reforms depend on key goals such as achieving drug supply security, containing costs, and promoting both domestic research and development capacity as well as access to and affordability of essential drugs.

In 2016, the *Healthy China 2030 Plan* was launched, with a clear focus on patient-centered, value-based healthcare. Since then, there have been more intensified efforts in making decisions more evidence-based and value-informed decisions. Particular highlights include the establishment of a national health technology agency in 2018, the institutionalization of evaluation and assessment tools in the health decision-making process, conducting of generic quality consistency evaluation (GQCE)³ by the National Drug Administration, and the pooling of care purchasing power through the creation of the Chinese National Health Insurance Bureau, which will supervise health insurance across both urban and rural populations.

Against the background, a national generic procurement reform has been launched. By defining the minimum quantity, the reform aims to effectively lower the price of quality generics and improve drug supply security in the country.

2. The “4+7” drug procurement reform

2.1 Overview

In June 2018, the National government in China decided to launch a new round of drug pricing and procurement reform. After the issuance of the National Pilot Plan of Centralized Drug Procurement, the initial procurement of 31 generics was implemented in 4

Procurement in Health Facilities (Weicaifa [2010]64), the State Council Office's Notice on Establishing and Standardizing Essential Drug Procurement in Government-sponsored Primary Health Facilities (Guobanfa [2010]56), the State Council Office's Notice on Improving the Centralized Drug Procurement in Health Facilities (Guobanfa [2015]7), the State Council Office's Opinions of Further Improving Production, Circulation and Utilization of Drug (Guobanfa [2017]13).

³ In March 2016, the National Drug Administration has launched the program on generic consistency test (GCE) after issuance of the Opinion on Conducting Consistency Evaluation of the Quality and Efficacy of Generic (Drugs Guobanfa [2016]8).

municipalities (Beijing, Shanghai, Tianjin and Chongqing) and 7 cities (Guangzhou, Shenzhen, Xi'an, Dalian, Chengdu, Xiamen). This reform was coined the “4+7” procurement reform.

Principles of the procurement reform are defined as the following: 1) organization by the national government; 2) procurement implemented by the alliance formed by the pilot cities; 3) all transactions performed on the online platform.

Different from previous pilots, this “4+7” reform is aimed to restructure generic procurement in the country with the unprecedentedly high political commitment, with particular focus on the quantity guarantee, concurrence and consistency of national-level bidding, local-level procurement and hospital-level purchasing and prescribing, and payment and other incentives for procurement enforcement (Table 1).

Table 1. Comparison of the “4+7” reform and the previous reforms

	The “4+7” reform	Previous pilots
Leadership	The State Council	Municipal/provincial government, or regional government alliance
Scale	Nationwide	Municipal/ provincial/regional level
Initiator	Payers, with support of regulators, health administrators	Local/provincial/national health authorities
Implementers	All the public hospitals at primary, secondary and tertiary level	All the public hospitals at primary, secondary and tertiary level
Price	Huge price reduction based on the guaranteed national purchasing	Moderate price reduction, and sometimes price rising after procurement
Quantity	Predefined national minimum quantity, and quota for public hospitals	Quantity is depend on the specific facility
Payment	Minimum 30% prepayment by the payer;	Varied depend on the local budget;
Incentives	Compensation, performance assessment	Compensation, performance assessment
implementation	Procurement and facility-level purchasing is unified in the same process; payment tariff is the same as the procurement price	Procurement and facility-level purchasing is separate; hospitals can decide if they will purchase the product

A working group is set up to coordinate the pilot, which is led by the State Council. Representatives of the national health payer, administer and regulator participate. Under the working group, the Joint Procurement Office (JPO), the procurement alliance formed by the representative of the procurement agency in the pilot cities is established to oversee the bidding and procurement process (Figure 1). JPO is hosted by the Sunshine Medical Procurement All-In-One⁴ (the local drug, diagnostic and device procurement agency in Shanghai).

This reform is implemented mainly by the National Health Insurance Bureau (NHIB), a newly established agency dating to early 2018, which has a mandate for pricing and procurement of drugs and disposables. The National Health Commission (NHC) will support the reform by introducing policy that encourages purchasing and prescribing of the selected drug, and by managing the provider’s behavior. The National Drug Administration is responsible for the quality assurance of the drug.

⁴ <http://www.smpaa.cn/>.

Figure 1. Organizational structure of the “4+7” reform

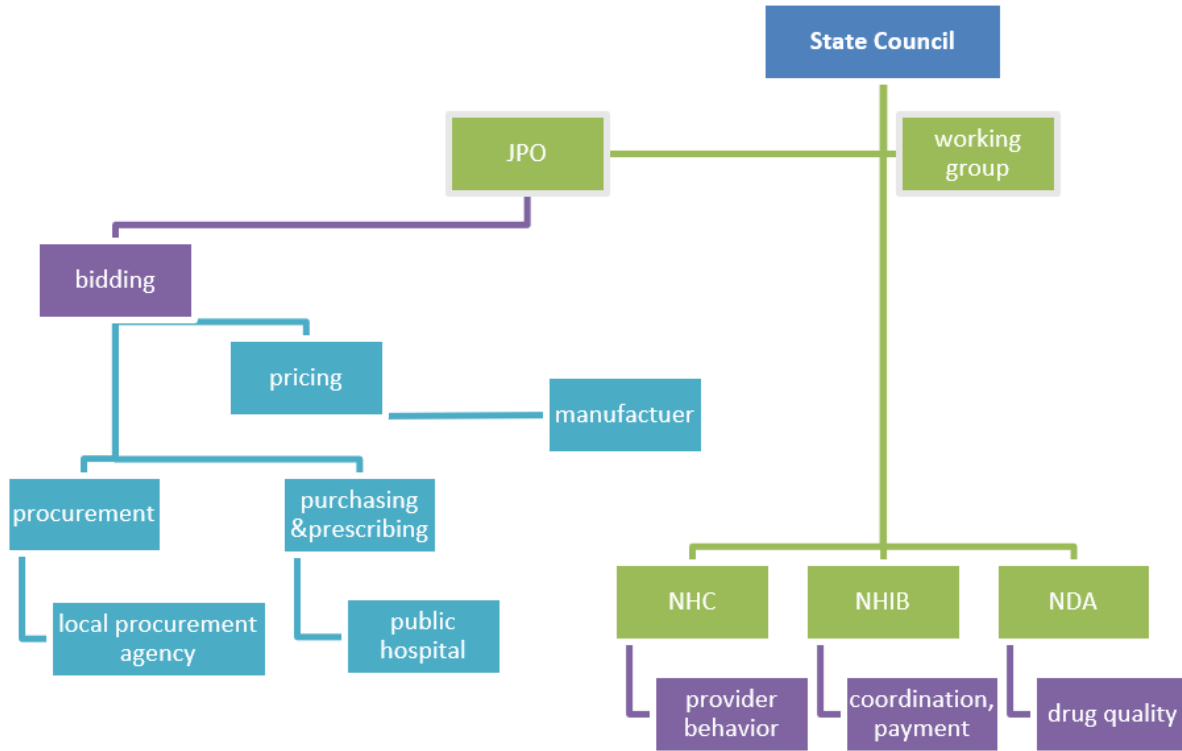


Figure 2. The JPO function on the SMPA website

SMPA 上海阳光医药采购网
Sunshine Medical Procurement All-in-One

请输入关键字

首页 信息公开 区县动态 服务大厅 公众服务 联系我们 关于我们

最新资讯	4+7城市药品集中采购
[置顶][2-2]关于“全面实施药品挂网公开议价采购”等有关事项... 2019-02-02	[1-28]我国统筹推进国家组织药品集中采购和使用试点落地... 2019-01-28
[置顶][1-3]关于“全面实施药品挂网公开议价采购”等有关事项... 2019-01-03	[1-18]国新办举行国家组织药品集中采购和使用试点工作吹风... 2019-01-18
[置顶][9-30]关于全面实施药品挂网公开议价采购的通知 2018-09-30	[1-17]国务院办公厅关于印发国家组织药品集中采购和使用... 2019-01-17
[置顶][8-30]关于本市开展抗癌药专项集中采购的通知 2018-08-30	[1-11]韩正出席医疗保障工作座谈会并讲话 2019-01-11
[12-25]关于“全面实施药品挂网公开议价采购”等有关事项... 2018-12-25	[12-17]关于公布4+7城市药品集中采购中选结果的通知 2018-12-17
[11-11]关于调整部分药品纳入本市医保支付后协议采购价的... 2018-11-11	[12-8]关于国家组织药品集中采购试点答记者问 2018-12-08
[9-25]关于调整部分药品纳入本市医保支付后协议采购价的... 2018-09-25	[12-7]孙春兰出席国家组织药品集中采购和使用试点工作部... 2018-12-07
[9-18]关于调整部分药品纳入本市医保支付后协议采购价的... 2018-09-18	[12-7]4+7城市药品集中采购拟中选结果上海地区配送企业公... 2018-12-07

All the initially selected drugs were those generics passed GQCE by the time of pilot planning and their reference originators. After review and discussions, several drugs were dropped for various reasons such as the non-applicability of the drug for mental illness, and finally 31 drugs were selected. The assumption is that these drugs have a quality and efficacy

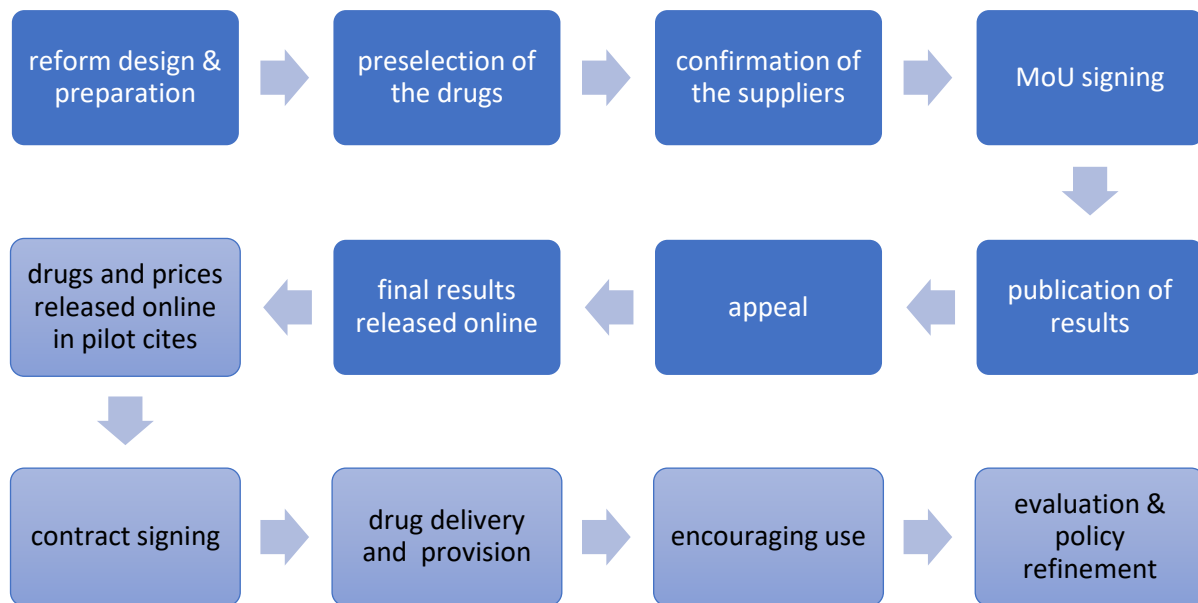
guarantee provided by the national drug regulator. All the drugs are main formulation, and 90% are oral form (Appendix).

The bid is open to all the manufacturers registered in the mainland. The pilot cities were major cities located in the western, central and eastern regions in the country, which were chosen based on market share, procurement capacity, and previous reform experience. More importantly, these cities are willing to take risks and move ahead with the drug procurement reform.

2.2 Implementation process

The pilot program has its own plan and framework (Figure 2). It is planned as a 3-stage process: 1) bidding, 2) procurement implementation, and 3) evaluation. So far the bidding process has been completed and plans are underway to proceed to the 2nd and 3rd stages.

Figure 2. The implementation process of the “4+7” drug procurement reform

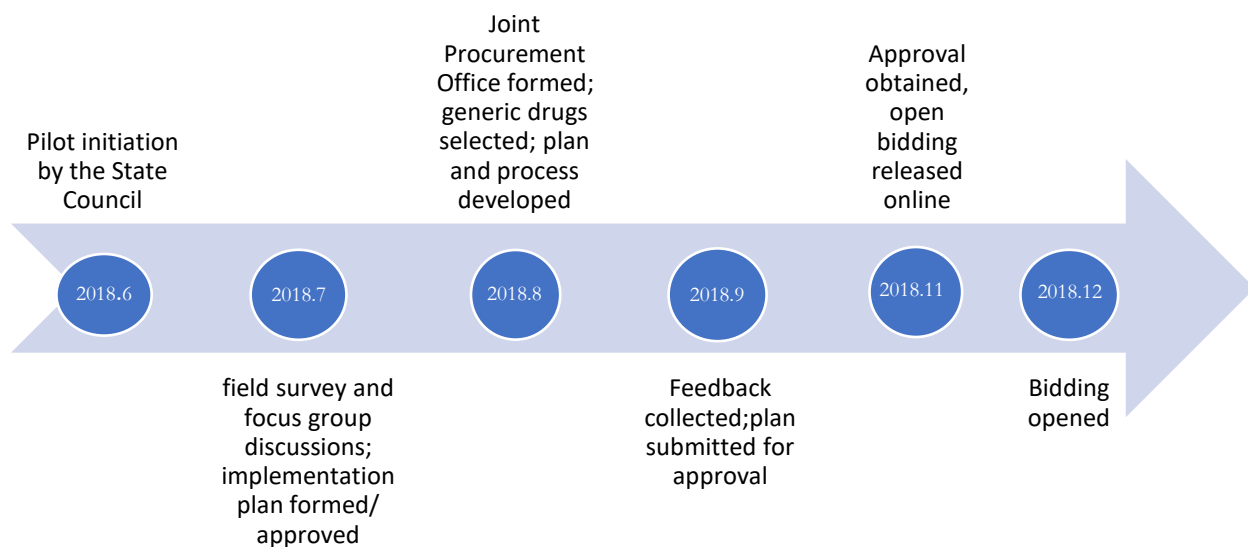


Note: All completed activities are in dark blue, and the unfinished in pale blue.

2.2.1 Reform design and preparation

In June 2018, the reform was primarily decided in a meeting of the Health Reform Steering Committee of the State Council. After a field survey and discussions with key stakeholders organized by the NHIB, a national reform plan was formed and approved by the State Council in July. JPO, an alliance of the local pilots was established, to act on behalf of the national government and oversee the development and implementation of the pilot. In mid November 2018, JPO published its Paper on Centralized Drug Procurement in “4+7” Cities, initiating the open tendering process. The initial bidding was opened in Shanghai early December, signaling the beginning of bidding in pilot cities (Figure 3 & 4).

Figure 3. Timeline of the 1st stage of the “4+7” drug procurement reform



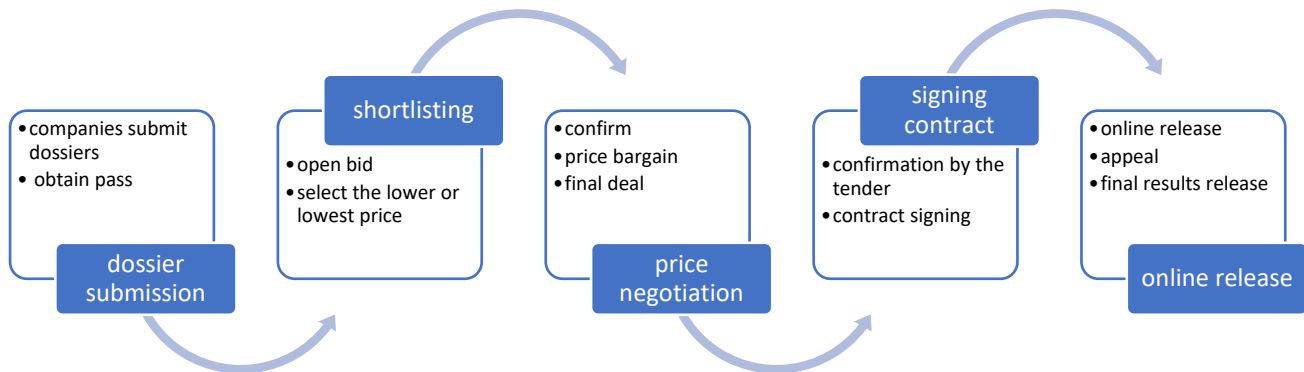
2.2.2 The bidding process

The bidding process became a 2-step process. For each drug, the lowest bidder will become the “preliminary candidate”. If two or more companies offer the same lowest price, the JPO will determine which one becomes the preliminary candidate on the basis of each company’s capacity to meet the minimum quantity requirement on the basis of annual production and sales. The company that offers the second lowest price will become the backup candidate in case the preliminary candidate cannot satisfy the quantity requirement. In the second stage, the JPO will decide whether it accepts the preliminary candidate’s offering price. If three or more companies have tendered during the first stage, it is considered competitive. The JPO will generally accept the price and the tender will end by awarding the contract to the preliminary candidate. If only one or two companies have entered the tender, the JPO will compare the reduction in the offered price from the lowest price at which the drug was sold in the 11 cities during the previous year. The JPO requests that the price be reduced if it is higher than in the past. The biggest change from the current bidding mechanism is that originators (patent expired) directly compete with the generics, which is intended to drive the drug price down.

Under the “4+7” drug tendering system, a company is provided with a substantial market size guarantee. The 11 pilot cities make up nearly one-third of the national market. The minimum market size represents 60% of the total sales of the drug in the pilot cities. That means that the total quantity guarantee is around 20% of the national total.

The JPO set up a price negotiation team to bargain with tenders during the bidding process. The basis for a price cut is 10% off the past lowest price, and this reference standard is arbitrarily set without formal calculation. The final prices were surprisingly lower than the expected price. An antibiotic tender tried to bargain for a higher price, but failed in the short-listing process.

Figure 4. Bidding process of the “4+7” drug procurement reform



2.2.3 Procurement implementation

To ensure the procurement implementation, the National Health Commission (NHC) and National Drug Administration (NDA) have issued relevant policy documents to encourage purchasing and prescription⁵ in public hospitals and assure quality of the drugs that enter the public hospitals respectively⁶. A provincial surveillance network must be established to supervise drug prescription and utilization, and incentives and performance management mechanisms are designed to steer the provider behavior change.

The State Council issued the *Pilot Plan of National Centralized Procurement and Use* (Guobanfa [2009]2) on January 17, 2019, formally defining the policy framework of the national reform. The associated documents will be issued by the JPO soon, and procurement contracts will be signed between the JPO and the selected suppliers by the end of February 2019. Formal procurement in the pilot cities is supposed to be launched in March 2019. At present, Shanghai, Beijing, Tianjin, Liaoning Province (Dalian), and Fujian (Xiamen) have issued local reform plans. Fujian Province even plans to scale up the reform to the whole province.

As a pioneer of previous drug procurement reforms, Shanghai Municipality has been chosen as an initial pilot of the national pilot. It is also the first pilot city that issued the local reform plan. The local public procurement agency, SMPA, released the amendment document on implementing the “4+7” drug procurement reform two weeks after the national bidding. The policy says that the purchasers will pay 50% of all drug costs to the designated distributor within 5 working days after the tri-party contract signing. The initial payment will be made mainly by the public health insurance funds at the local level. As required by the national policy, initial payment must be no less than 30% of the total payment. Another 45% of payment will be paid half a year after the procurement implementation or the total

⁵ The National Health Commission. *The Notice on Facility-Level Procurement and Use of the Drugs for the National Pilot on the Centralized Drug Procurement*. Guoweibanyihan[2019]77.

⁶ The National Drug Administration. *The Notice on Strengthening Regulation of the Drugs for the “4+7” Drug Procurement Reform*. Guojianyaoguan[2018]57.

quantity reaches 50% of the total quota defined in the contract. At the end of the drug supply period, the purchasers will pay all the rest.

To ensure use, the Shanghai government will adopt quality assurance measures, ensure supply and delivery, and promote drug use in the hospital by simplifying purchasing procedures and incentivizing prescriptions.

By the time of releasing the report, all 11 cities have issued their own implementation plans, some of which give details on coordinated actions between the payer, provider and regulator. However, some analysts doubt the feasibility of some of the measures proposed.

2.2.4 Evaluation

The pilot is ongoing, and a research team of the Peking University Health Science Center is commissioned to conduct an evaluation, though the results are unreleased. As the other large social reforms in the country, the “4+7” drug procurement reform is taking a typical experimentalist approach⁷. As test beds for the formation of the national policy on centralized procurement, pilots in different cities will surely be followed and researched by the national government and other key policy stakeholders. The second round of the reform is planned to be launched mid 2019.

2.3 Preliminary results

25 out of 31 generic drugs were selected, of which there are 3 originator drugs (patent expired long ago) and 22 generics. Most of the failed bids are antibiotics, and the cause of failed bids was usually unsatisfied price reduction (Appendix). Compared with the lowest prices in the pilot cities in 2017, the average price cut was 52%, and the highest price cut was 96%. According to the public announcement of the bidding results, the final retail prices of 6 drugs are much lower than those in the US market, of which the entecavir (30 tablets, 500 microgram) for hepatitis B has the biggest per unit price gap ((US\$ 0.09 per tablet compared to US\$ 10.93⁹ in the US and US\$15.84 in UK¹⁰.

). Based on the rough estimation by the NHIB, further cuts of 10%-20% of drug prices could be achieved, though NHIB recognized that the current prices are already very low. Nearly 0.85 billion USD would be saved with procurement of 25 drugs from the payer’s perspective¹¹, and the savings will be enormous with scale-up of the reforms to other non-pilot cities.

20 drugs have only one formulation, while 11 have 2 formulations. Competitiveness is judged by the number of tenders (companies) for each formulation. 25 formulations were subject to 2 tenders, 16 formulations to 3 or more tenders, and one formulation has only 1 tender. The 1-tender drug saw a 29% price cut, 2-tender drugs had an average price cut of 56% (26%-87%), while the 3-tender drugs on average achieve a 50% (16%-96%) price cut.

⁷ Xiao Y, Zhao K, Bishai DM, Peters DH. Essential drugs policy in three rural counties in China: what does a complexity lens add? *Soc Sci Med*. 2013;93: 220–8.

⁸ Xiao, Y et al. Evaluation and learning in complex, rapidly changing health systems: China’s management of health sector reform. *Globalization and Health* (2018) 14:112. <https://doi.org/10.1186/s12992-018-0429-7>.

⁹ https://www.goodrx.com/entecavir?dosage=0.5mg&form=tablet&label_override=entecavir&quantity=30.

¹⁰ <https://www.nice.org.uk/guidance/ta153/chapter/2-The-technology>.

¹¹ The calculation is based on the comparison of the total costs of 25 selected drug based on the past lowest and the current procurement prices.

Multi-nationals, such as Pfizer and Sanofi, offered 10%-30% discounts in the initial tendering process, and some others even pulled out at the first bidding stage after seeing incredibly low prices offered by the Chinese drug manufacturers. The domestic companies and multinationals saw huge price gaps. As a result, the majority of the listed suppliers are domestic companies with relatively large capacity, which are also producers of active pharmaceutical ingredients (API) of the drug. Early signs of market consolidation are seen. Huge repercussions were created on the pharmaceutical industry, and the domestic stock market for pharmaceuticals suffered a loss of 44.2 billion USD in the first 2 days after the bidding. To stabilize the market, NHIB held a meeting on December 26 to clarify some confusion.

3. Discussion

The “4+7” drug procurement reform is an attempt to achieve well-coordinated drug provision, through pricing, procurement and payment policies initiated by the payer. Generics are to be promoted in the Chinese market. Prices of originators and generics will be further cut to ensure affordability of essential drugs.

Based on the national pilot plan, China will expand the program to cover more cities and drugs. Quality assurance measures will be forcefully implemented by the NDA to guarantee safe products. Performance assessment mechanisms will be established by NHIB and NHC jointly, with the participation of hospitals, physicians, and third-party evaluation agency. Close partnership and coordination among key policy stakeholders is required, especially between the NHIB, NHC, and NDA.

In future reforms, three issues will need to be addressed:

Firstly, product selection and pricing is the cornerstone of drug procurement. The initial selection and bidding of the 31 drugs was not systematically informed by evidence. Experts and some key decision-makers are concerned about the surprisingly huge price cuts and doubt the rationality of domestic companies’ initial responses to the reform. The national policy-makers need to consider reasonable drug selection and pricing mechanisms with inputs from health technology assessments in future. With the establishment of the National Center for Medicines and Health Technology Assessment, the national government is institutionalizing health technology assessment (HTA) in the health policy-making process, with drug assessment as a main pilot area. 2018 saw NHIB’s initial trial of conducting cancer drug price negotiations with the input of cost-effectiveness evidence. We believe HTA will play a decisive role in future pricing and procurement of health commodities, and contribute to the pursuit of value-based healthcare.

The second is to ensure pilot implementation. Two types of implementation mechanisms need be established, including incentives through new payment arrangements, and enforcement mechanisms such as contract management, accountability enforcement, and performance assessment in public hospitals. Adoption of these mechanisms calls for joint action of multiple policy-making bodies: to name a few, the NHIB (rule setting and coordination), National Drug Administration (drug quality), National Health Commission (monitoring and supervision of actual use), and Ministry of Industry and Information Technology (drug trade and distribution).

The third issue is the generic drug industry’s consolidation as the nationwide rollout proceeds. It is believed that the reform will drive small Chinese enterprises with irregular performance or inferior production capacity out of the market, and push more pharmaceutical companies towards innovative drug research and development. In the

process, the government should build up pre-warning systems or alerts for monopolies and anticompetitive behaviors, and consider possible countermeasures or proactive policies.

However, the plan for national rollout is not yet clear. The pilot is changing the main actors' power, interests, and relationships. Based on media coverage, industry actors, including manufacturers of originators and generics and of national and international origin, are concerned. Doctors are worried about limitations on choice and patients' reactions. With barely adequate procurement capacity, local governments, especially those in non-pilot areas, are worried about the quality and production capacity of the listed generic manufacturers.

4. Conclusion

On its way to UHC, China is launching national reforms on centralizing drug procurement. "4+7" drug procurement reform represents the latest ambitious attempt of the national government to contain drug costs by reducing prices, encouraging generic drug use, and improving the availability of quality and cost-effective products. With the completion of stage one of the reform—selection of the drugs and national bidding for suppliers—the reform shows initial success in driving huge price cuts and reshaping the quality-volume-price balance of the drug market. However, as the largest nationwide drug procurement reform, it is complex and will impact multiple actors, calling for more profound institutional changes and collaboration and coordination among government agencies. Although it is still too early to make final judgments of the results, the procurement reform has strong political commitment, wide involvement of key stakeholders, huge potential market impact and will shape the future of the Chinese drug market. With the launch of the national HTA program, more discussions and explorations about value in health can be expected in near future.

Appendix

List of the selected drug and relevant information

	Drug	Indication	Formulation	Main formulation	Tenders	National Lowest Price per Pill/Unit (USD)	Final Bidding Price per Pill/Unit (USD)	Price Cut
1	Atorvastatin Oral Regular Release Dosage Form	Hypercholesterolemia; Atherosclerosis	10mg		Pfizer Pharmaceutical Co., Ltd.	0.93	/	/
					Beijing Jialin Pharmaceutical Co., Ltd.	0.50	/	/
					Lepu Medical Technology (Beijing) Co., Ltd.	0.45	/	/
			20mg	Yes	Pfizer Pharmaceutical Co., Ltd.	1.23	/	/
					Beijing Jialin Pharmaceutical Co., Ltd.	0.85	0.14	84%
2	Rosuvastatin Oral Regular	Primary hypercholesterolemia	5mg		AstraZeneca Pharmaceutical Co., Ltd.	0.65	/	/

	Release Dosage Form	rolemia; Mixed lipemia			Zhejiang Jingxin Pharmaceutical Co., Ltd.	0.30	/	/			
					Chia Tai Tianqing Pharmaceutical Group Co., Ltd.	0.39	/	/			
					Zhejiang Hisun Pharmaceutical Co., Ltd	0.28	/	/			
			10mg	Yes	AstraZeneca Pharmaceutical Co., Ltd.	1.09	/	/			
					Zhejiang Jingxin Pharmaceutical Co., Ltd.	0.54	0.12	79%			
					Chia Tai Tianqing Pharmaceutical Group Co., Ltd.	0.53	/	/			
					Zhejiang Hisun Pharmaceutical Co., Ltd	0.40	/	/			
					Simcere Pharmaceutical Co., Ltd.	0.47	/	/			
			3	Clopidogrel Oral Regular Release Dosage Form	Atherothrombotic events	25mg		Shenzhen Salubris Pharmaceutical Co., Ltd.	0.50	/	/
								Lepu Medical Technology (Beijing) Co., Ltd.	0.45	/	/
75mg	Yes	Sanofi Pharmaceutical Co., Ltd.				2.40	/	/			
		Shenzhen Salubris Pharmaceutical Co., Ltd.				1.21	0.47	61%			
		Lepu Medical Technology (Beijing) Co., Ltd.				1.09	/	/			
4	Irbesartan Oral Regular Release Dosage Form	Hypertension				75mg	Yes	Sanofi Pharmaceutical Co., Ltd.	0.11	/	/
			Zhejiang Huahai Pharmaceutical Co., Ltd	0.09	0.03			66%			
			150mg	Yes	Sanofi Pharmaceutical Co., Ltd.	0.64	/	/			
					Zhejiang Huahai Pharmaceutical Co., Ltd	0.16	/	/			
					Jiangsu Hengrui Pharmaceutical Co., Ltd	0.28	/	/			

5	Amlodipine Oral Regular Release Dosage Form	Hypertension; Stable angina	5mg	Yes	Pfizer Pharmaceutical Co., Ltd.	0.64	/	/
					Suzhou Dawnrays Pharmaceutical Co., Ltd	0.19	/	/
					Shanghai Haini Pharmaceutical Co., Ltd	0.10	/	/
					Jiangsu Huanghe Pharmaceutical Co., Ltd	0.49	/	/
					Zhejiang Jingxin Pharmaceutical Co., Ltd.	0.04	0.02	42%
					China Resources Saike Pharmaceutical Co., Ltd	0.19	/	/
6	Entecavir Oral Regular Release Dosage Form	Chronic adult hepatitis B	0.5mg	Yes	Bristol-Myers Squibb	4.10	/	/
					Chia Tai Tianqing Pharmaceutical Group Co., Ltd.(Dispersible Tablet)	1.84	0.09	95%
					Jiangqingfeng Pharmaceutical Co., Ltd.(Capsule)	1.97	/	/
					Suzhou Dawnrays Pharmaceutical Co., Ltd	2.87	/	/
					Haisco Pharmaceutical Group Co., Ltd.	1.34		
					Anhui Baker United Pharmaceutical Co., Ltd.	/	/	/
7	Escitalopram Oral Regular Release Dosage Form	Depression disorders; Panic disorder	10mg	Yes	H. Lundbeck A/S	2.07	/	/
					Hunan Dongting Pharmaceutical Co., Ltd.	0.98	/	/
					Shandong Jewim Pharmaceutical Co., Ltd.	1.15	/	/
					Sichuan Kelun Pharmaceutical Co., Ltd.	0.99	0.65	34%
8	Paroxetine Oral Regular Release Dosage Form	Depression	20mg	Yes	GlaxoSmithKline Pharmaceutical Co., Ltd.	1.29	/	/
					Zhejiang Huahai Pharmaceutical Co., Ltd	0.52	0.25	52%

9	Olanzapine Oral Regular Release Dosage Form	Depression; Obsessive-compulsive disorder; Panic disorder; Social phobia/social anxiety disorder	5mg		Eli Lilly and Company	3.37	/	/
					Jiangsu Haosen Pharmaceutical Co., Ltd.	1.14	/	/
			10mg	Yes	Eli Lilly and Company	5.87	/	/
					Jiangsu Haosen Pharmaceutical Co., Ltd.	1.93	1.42	25%
10	Cefuroxime Axetil (Cefuroxime) Oral Regular Release Dosage Form	Infections	250mg	Yes	GlaxoSmithKline Pharmaceutical Co., Ltd.	0.42	/	/
					Shenzhen Zhijun Pharmaceutical Co., Ltd.	0.37	/	/
					United Laboratories	0.20	/	/
					Chengdu Brilliant Pharmaceutical Co., Ltd.	0.13	0.08	40%
11	Risperidone Oral Regular Release Dosage Form	Acute and chronic schizophrenia	1mg	Yes	Xian Janssen Pharmaceutical Co., Ltd.	0.42	/	/
					Zhejiang Huahai Pharmaceutical Co., Ltd	0.11	0.10	78%
12	Gefitinib Oral Regular Release Dosage Form*	NSCLC	250mg	Yes	AstraZeneca Pharmaceutical Co., Ltd.	42.96	8.07	81%
					Shandong Qilu Pharmaceutical Co., Ltd.	23.40	/	/
13	Fosinopril Oral Regular Release Dosage Form*	Hypertension; Heart failure	10mg	Yes	Bristol-Myers Squibb	0.41	0.12	70%
					Zhejiang Huahai Pharmaceutical Co., Ltd	0.29	/	/
14	Irbesartan and Hydrochlorothiazide Oral Regular Release Dosage Form	Essential hypertension	150mg+12.5mg	Yes	Sanofi Pharmaceutical Co., Ltd.	0.66	/	/
					Chia Tai Tianqing Pharmaceutical Group Co., Ltd.	0.38	/	/
					Zhejiang Huahai Pharmaceutical Co., Ltd	0.19	0.16	16%
15	Ranipril Oral Regular Release Dosage Form	Essential hypertension; Secondary hypertension	5mg		AstraZeneca Pharmaceutical Co., Ltd.	0.44	/	/
					Zhejiang Huahai Pharmaceutical Co., Ltd	0.12	/	/
			10mg	Yes	AstraZeneca Pharmaceutical Co., Ltd.	0.44	/	/
					Zhejiang Huahai Pharmaceutical Co., Ltd	0.25	0.03	87%

16	Tenofovir Disoproxil Oral Regular Release Dosage Form	Chronic hepatitis B	300mg	Yes	GlaxoSmithKline Pharmaceutical Co., Ltd.	2.41	/	/
					Chengdu Brilliant Pharmaceutical Co., Ltd.	2.42	0.09	96%
					Shandong Qilu Pharmaceutical Co., Ltd.	2.25	/	/
					Chia Tai Tianqing Pharmaceutical Group Co., Ltd.	2.17	/	/
					Fujian Cosunter Pharmaceutical Co., Ltd.	/	/	/
17	Losartan Oral Regular Release Dosage Form	Hypertension	50mg	Yes	Merck & Co., Inc.	0.82	/	/
					Zhejiang Huahai Pharmaceutical Co., Ltd	0.36	0.15	57%
			100mg		Merck & Co., Inc.	1.04	/	/
					Zhejiang Huahai Pharmaceutical Co., Ltd	0.59	/	/
18	Amoxicillin Oral Regular Release Dosage Form	Infections	250mg	Yes	United Laboratories	0.07	/	/
					Conba Group Co., Ltd.	0.04	/	/
					CSPC Group	0.02	/	/
19	Azithromycin Oral Regular Release Dosage Form	Infections	250mg	Yes	Pfizer Pharmaceutical Co., Ltd.	1.39	/	/
					Pliva Group	1.32	/	/
					CSPC Group	1.21	/	/
					Fosun Pharmaceutical Co., Ltd.	1.13	/	/
		500mg	Yes	Pliva Group	2.44	/	/	
				CSPC Group	/	/	/	
20	Enalapril Oral Regular Release Dosage Form	hypertension; heart failure	5mg		Merck & Co., Inc.	0.11	/	/
					Yangtze river pharmaceutical group	0.08	/	/
			10mg	Yes	Merck & Co., Inc.	0.18	/	/
					Yangtze river pharmaceutical group	0.12	0.08	30%
21	Levetiracetam Oral Regular Release Dosage Form	Partial seizures	250mg	Yes	UCB Pharmaceutical Co., Ltd.	0.65	/	/
					Zhejiang Jingxin Pharmaceutical Co., Ltd.	0.47	0.35	24%
22	Tramadol Oral Regular	Pain	50mg	Yes	Beijing Mundi Pharmaceutical Co., Ltd.	/	/	/

	Release Dosage Form				CSPC Group	0.04	/	/
23	Imatinib Oral Regular Release Dosage Form	CML; GIST	100mg	Yes	Novartis	20.81	/	/
					Jiangsu Haosen Pharmaceutical Co., Ltd.	2.01	1.54	24%
24	Alfacalcitol Oral Regular Release Dosage Form	Osteoporosis	0.25µg	Yes	Teijin Ltd.	0.52	/	/
					Teva Pharmaceutical Industries Limited	0.35	/	/
					Chongqing Yaoyou Pharmaceutical Co., Ltd.	0.18	/	/
			0.5µg		Teijin Ltd.	0.54	/	/
					Chongqing Yaoyou Pharmaceutical Co., Ltd.	0.37	/	/
25	Montelukast Oral Regular Release Dosage Form	Asthma	10mg	Yes	Merck & Co., Inc.	1.01	/	/
					Anbison Lab.,Ltd		0.57	43%
26	Montmorillonite Oral Powder	Acute and chronic diarrhea	3g	Yes	IPSEN	0.27	/	/
					Jiangsu Haosen Pharmaceutical Co., Ltd.	0.16	/	/
					Simcere Pharmaceutical Co., Ltd.	0.14	0.10	27%
					Tibet Aim Pharmaceutical Co., Ltd.	0.11	/	/
27	Captopril Oral Regular Release Dosage Form	Hypertension	25mg	Yes	Bristol-Myers Squibb	0.14	/	/
					Shanghai Pharmaceutical Co., Ltd	/	/	/
					CSPC Group	/	/	/
28	Pemetrexed Injection	Inoperable malignant pleural mesothelioma	100mg	Yes	Eli Lilly and Company	406.09	/	/
					Sichuan Huiyu Pharmaceutical Co., Ltd	356.78	119.57	66%
			500mg	Yes	Eli Lilly and Company	1451.94	/	/
					Sichuan Huiyu Pharmaceutical Co., Ltd	1435.99	409.92	71%
29	Flurbiprofen Ester Injection*	Postoperative analgesia; Cancer	50mg/5ml	Yes	Beijing Tide Pharmaceutical Co., Ltd	5.80	3.24	44%
					Wuhan Docan Pharmaceutical Co., Ltd	9.17	/	/

30	Dexmedetomidine Injection	Sedation	0.2mg/2ml	Yes	Yangtze river pharmaceutical group	27.60	19.63	29%
31	Azithromycin Injection	Infections	0.5g	Yes	Pfizer Pharmaceutical Co., Ltd.	13.73	/	/
					Hainan Poly Pharmaceutical Co., Ltd	12.99	/	/

Note: 1) The drug with a "*" is the original drug; 2) The national lowest price and final bidding price are converted at the exchange rate of the Bank of China on February 18, 2019; 3) The successful bidder and relevant information is highlighted in grey; 4) 6 drugs failed the bid, mostly antibiotics.