The project of clinical pathways linking to provider payment reform in rural China

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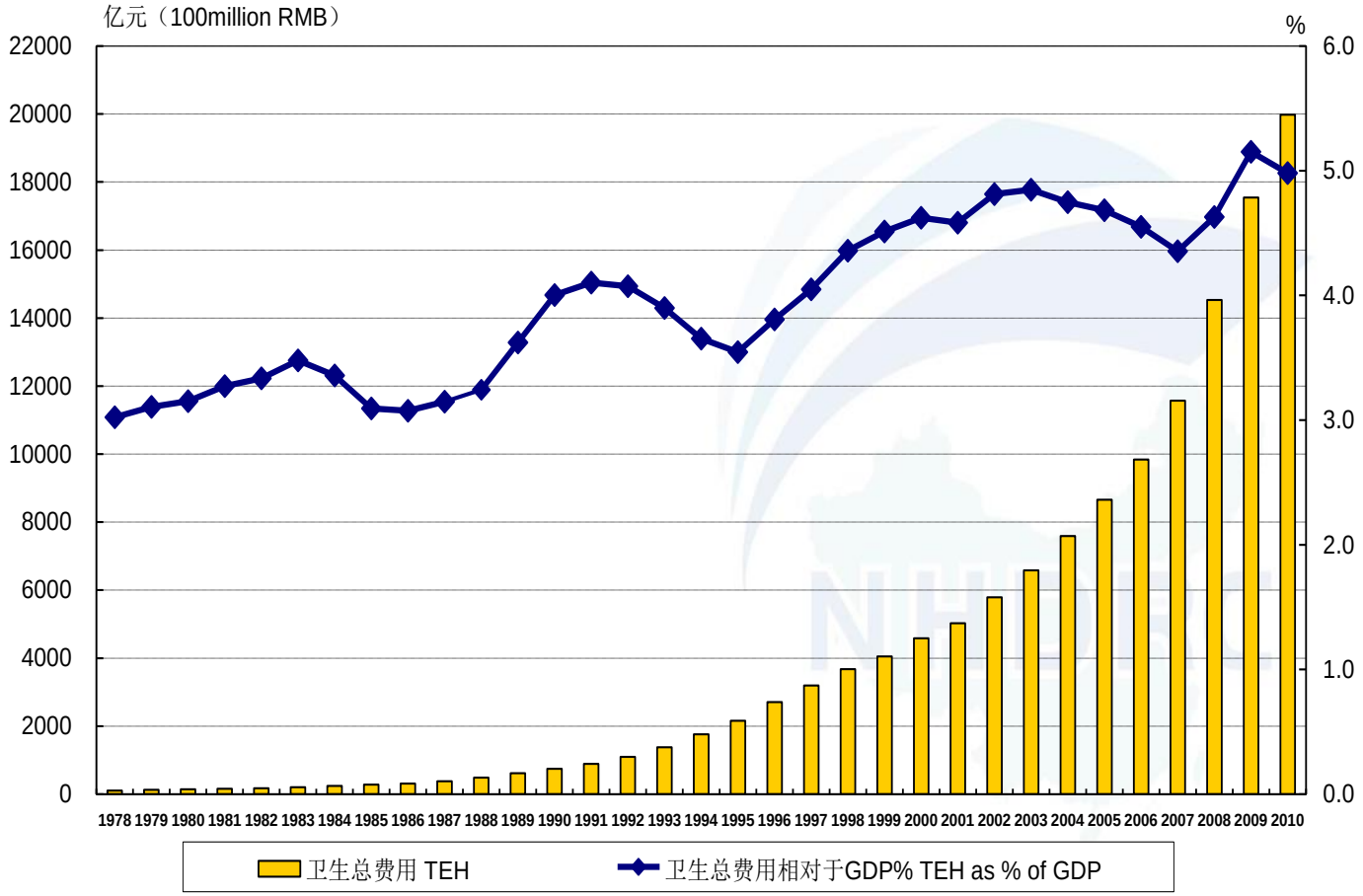
outlines

- Background and objectives
- Clinical pathway project
- Scale up of the project

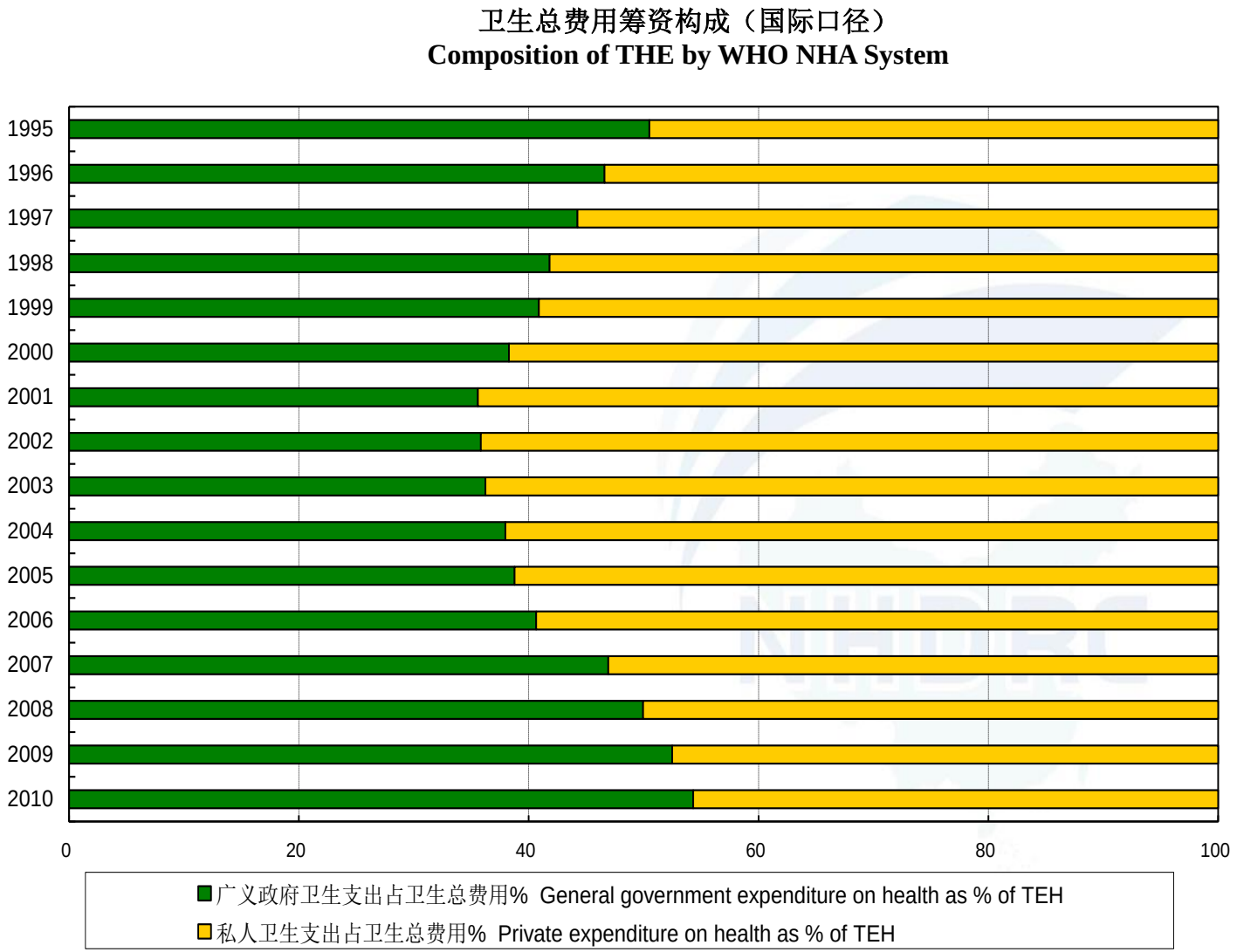
China Total Health Expenditure and Its Share of GDP

卫生总费用及其相对于国内生产总值%
China Total Expenditure on Health and its share of GDP



数据来源于卫生部卫生发展研究中心

Composition of THE by WHO NHA System



Over-do & Under-do Treatment in China

Antibiotics:42%，hormones:15%，Vitamins:69%

---Source from 6000 prescription survey

IV injection 10.4 billion bottles in total 2010，8 bottles/person, far above the 2.5 to 3.3 bottles international level

---NDRC deputy director address in 18th NPCSC

Nursing care under do , specially for patients with chronic diseases

---a CNHDRC field study

The Pilot Study on Clinical Pathways companying to payment reform in Rural China

Overall Goals

◆Regulate health provider's behavior;

◆Improve the quality of health care services;

◆Prevent the waste of health care resource;

◆Improve the efficiency of public health care funds and the beneficial level of insured population.

Identification of priority diseases

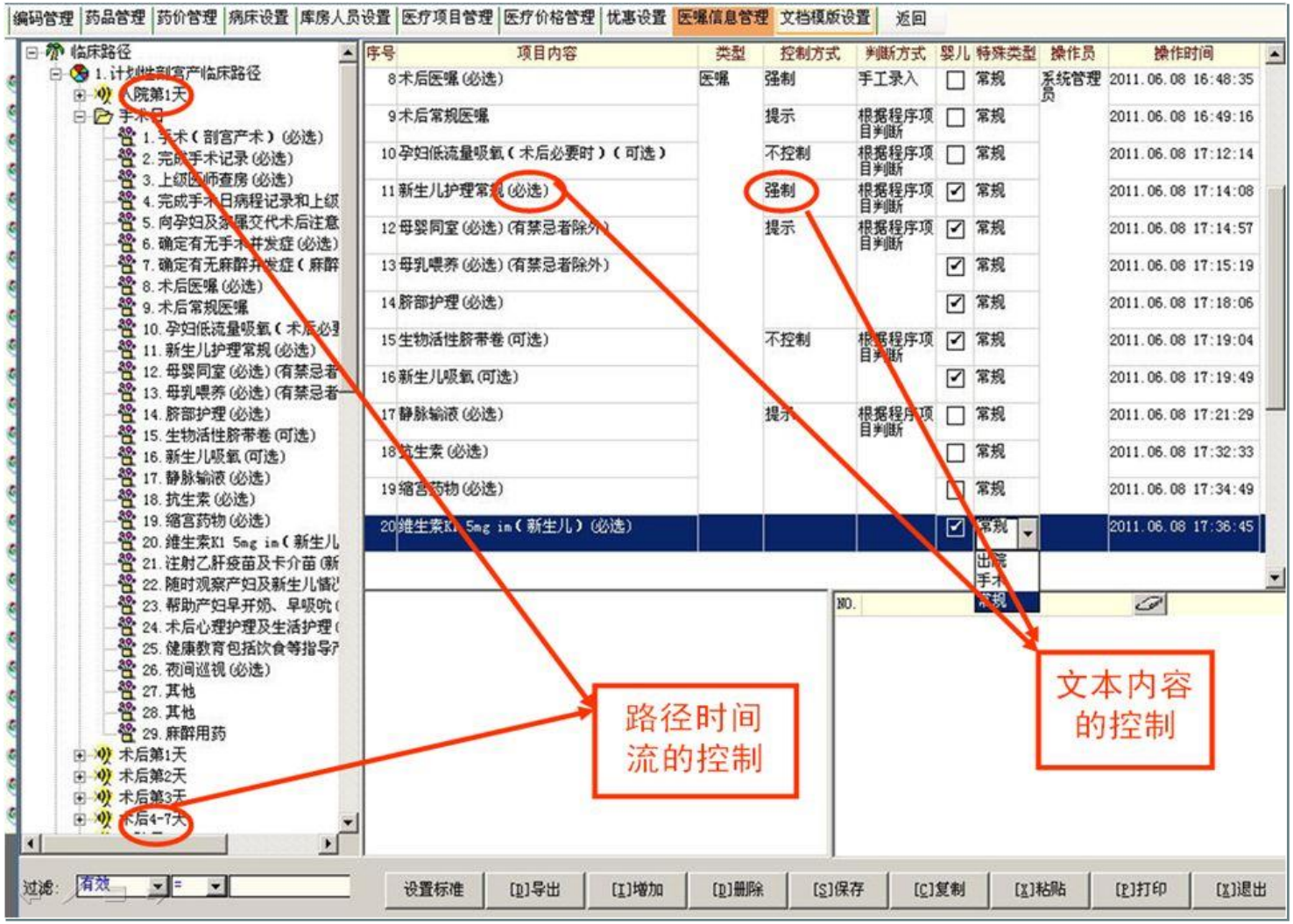
Gallbladder Benign Lesions	Vaginal Spontaneous Labour
Indirect Inguinal Hernia (simple and unilateral)	Community-acquired Pneumonia
Acute Simple Appendicitis	Stable Angina
Planed Cesarean Section	Acute Myocardial Infarction with ST-segment Elevation
Benign Ovarian Cysts	Cerebral Hemorrhage
Hysteromyoma	Cerebral Infarction

Criteria of selecting priority diseases:

- ✓ costly and expense stable；
- ✓ common and high incidence rate
- ✓ clear treatment plan, and matured technique,
- ✓ few variation during treatment process
- ✓ no complication cases

NICE Training in the process of clinical pathway development

E-clinical pathway



Change the payment ---case payment

Estimate minimum and maximum (incl. additional interventions to account for patient variation) cost based on evidence-informed clinical pathway

Establish cut-off for covering 80% of procedure per case for past 3 years, based on historical data in each hospital

Adjust for NCMS and Urban Insurance Scheme –no threshold, patient reimbursement rate increased

Negotiate with relevant stakeholders (professionals, administrators) to account for local costs and patient variation

Ceiling reimbursement price established

If savings: shared by hospital and doctors

OOP costs capped @ lower levels

Policy of payment reform

重庆市黔江区卫生局
重庆市黔江区财政局
重庆市黔江区人力资源和社会保障局 文件
重庆市黔江区民政局

黔江卫发〔2010〕号

关于对急性单纯性阑尾炎等十个单病种按临床路径实行单病种医疗费定额结算试点（试行）的通知

各街道办事处，各镇、乡人民政府，区政府各部门，各区属国有重点企业：

为贯彻《中共中央、国务院关于深化医药卫生体制改革的意见》和国务院《医药卫生体制改革近期重点实施方案（2009—2011年）》，根据卫生部项目资金监管中心《世界银行贷款/英国政府赠款中国农村卫生发展项目农村医疗机构诊治技术优化与村医疗诊治技术优化与补偿机制试点的批复》（卫项管便函〔2010〕64号）精神，决定在黔江中心医院开展急性单纯性阑尾炎等10个临床路径单病种实行医疗费用定额结算试点，现将有关事项通知如下：

一、实施的临床路径单病种

（一）急性单纯性阑尾炎

（二）腹股沟斜疝（单侧单纯性）

（三）子宫肌瘤手术治疗

（四）计划性剖宫产

（五）社区获得性肺炎

（六）胆囊良性病变择期手术

（七）自然临产阴道分娩

（八）脑出血

（九）脑梗塞

（十）1．急性ST段抬高型心肌梗死

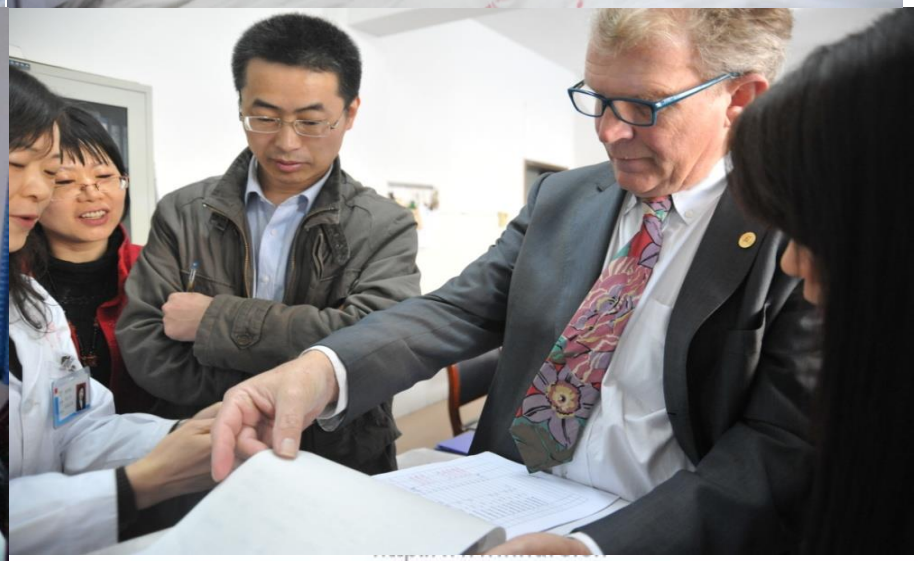
2．稳定型心绞痛

二、单病种医疗费用定额标准

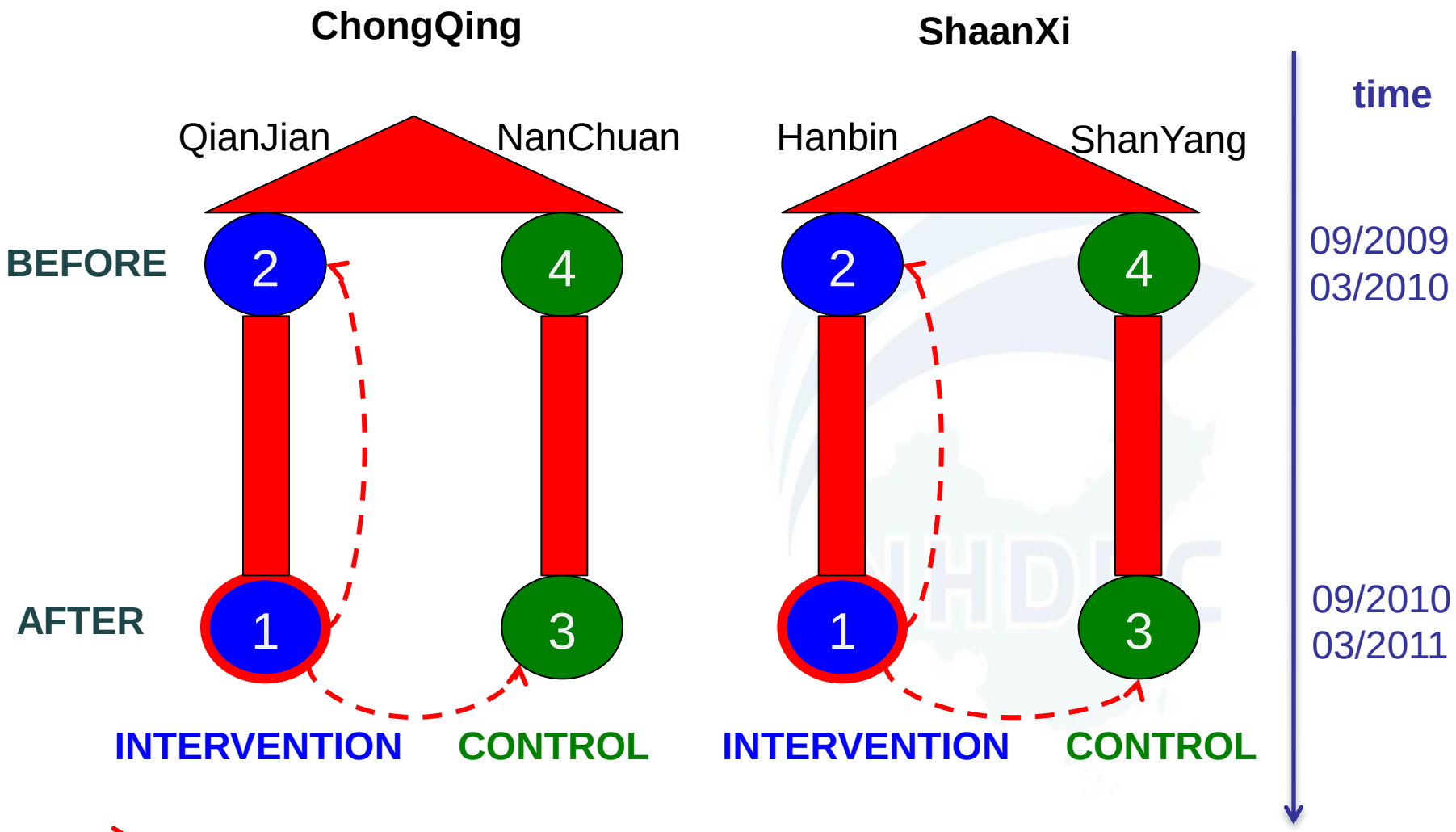
根据中央专家制定的各单病种《临床路径标准住院流程》，按照市物价局、市卫生局《重庆市医疗服务价格手册》（2004），经测算，10个单病种按临床路径治疗的定额标准如下：

序号	病名	费用标准（元）
01	急性单纯性阑尾炎	4500
02	计划性剖宫产	4000

Field supervision



Evaluation methods



Preliminary results: vaginal delivery

Provinces	Study Group	Total Cost (RMB) Before[a]	LOS (days) Before[a]	Total Cost (RMB) After[a]	LOS (days) After[a]
ShaanXi	I	981	3.74	867	3.25
	C	778	1.53	891	1.78

a: Bootstrapped means
b: Regression

Provinces	DiD (TC)[b]	DiD (LOS)[b]
ShaanXi[a]	-227; p<0.0001	-0.73; p<0.0001

Patient Experience

- Based on EQ5D* instrument for measuring Healthcare Related Quality of Life, patient experience, for those patients included in the CP, improved significantly i QianJian county hospital and improved (b significantly) in Hanbin county.
- Patient satisfaction bas factors such as and patient spital OP) was roughly the and intervention hospitals and and after in the intervention hospital.

In conclusion, CPs have improved or have not affected quality of life and patient satisfaction in the pilot hospitals.

*TTO, Japanese weights, data available upon request

Link with implementation levers and tools for enabling UHC

Pilots and toolbox

- Technical capacity building
- Policy makers awareness raising
- Clinician behaviour change
- Methods and process for CP and HTA/formulary development
- Case mix based provider payment
- IT decision support/training and billing systems
- Financing and coverage issues – NCMS experience

Research and evaluation

In-country pilots of policy interventions leading to UHC, starting with India and China

Shareable toolbox of products applicable across developing countries.

Peer-to-peer knowledge translation and sharing mechanisms

Universal Healthcare Coverage

- Global Fora and workshops
- Study tours and staff exchanges
- Electronic portal
- Regular newsletter and ListServ

Clinical pathway for Stroke with comorbidity

慢性阻塞性肺疾病临床路径表单

疾病编码：(慢性阻塞性肺疾病急性加重期疾病编码)ICD-10：J44.001/J44.101

最短住院天数：10天　　最长住院天数：21天　　本次住院天数：_____天

住院日数	第1天（住院日）	医嘱名称	医嘱类型	规格	剂量	用药方法	频次	输液速度
主要诊疗工作	询问病史及体格检查							
	进行病情初步评估，病情严重程度分级							
	上级医师查房							
	明确诊断，决定诊治方案							
	开化验单							
	完成病历书写							
	(一)一般项目							
	[1]呼吸科护理常规	呼吸科护理常规	长期					
	[2]一级护理或二级护理[必选] 二选一		**长期**				**每天执行一次**	
	医嘱项目1：	一级护理	长期				每天执行一次	
	医嘱项目2：	二级护理	长期				每天执行一次	
	[3]心电、血压、血氧饱和度监测[可选]（三项同时）	**心电监测、血氧饱和度监测**					**每天执行一次**	
	医嘱项目1：	持续心电监测	长期				每天执行一次	
	医嘱项目2：	持续呼吸功能监测	长期				每天执行一次	
	医嘱项目3：	血氧饱和度监测	长期				每天执行一次	
	[4]吸痰	吸痰（可选）	长期					
	[5]控制性吸氧	中心供氧（低流量）	长期					
	[6]留陪人	留陪人	长期					
	(二)检查							
	[7]血常规	血常规	临时					
	[8]尿常规	尿常规	临时					
	[9]大便常规	大便常规	临时					
	[10]肝肾功能、电解质	肝肾功能、电解质	临时					
	[11]凝血全套	凝血全套	临时					
	[12]血气分析（可选）	血气分析	临时					
	[13]胸部正侧位片或胸部CT（可选）（选其一）	胸部正侧位片	临时					

主路径（COPD） 合并(稳定期高血压) 合并(稳定期糖尿病) 合并(稳定期冠心病) 合并或并发(肺源性心脏病) 合并或并发(呼吸衰竭)

Costing of stroke and COPD with comorbidities

表1 临床路径成本测算及历史费用分析结果汇总-胶南市人民医院（单位：元）

病种	最小成本	最小成本+20%可选项	最小成本+30%可选项	最小成本+40%可选项	最小成本+50%可选项	最小成本+60%可选项	最小成本+80%可选项	最大成本	P80（2012年）[1]	P80病例数（2012）[2]	加权平均结果（一）[3]	加权平均结果（二）[4]
慢性阻塞性肺疾病（COPD）	4255.78	8630.22	10817.44	13004.66	15191.88	17379.10	21753.54	26127.98	7726.00	103.00	16215.50	11841.06
合并高血压	0.06	266.22	399.30	532.38	665.46	798.54	1064.71	1330.87	—	—		
合并糖尿病	336.49	592.64	720.72	848.80	976.88	1104.95	1361.11	1617.26	—	—		
合并冠心病	0.00	461.84	692.76	923.68	1154.60	1385.52	1847.36	2309.19	—	—		
合并或并发肺心病	0.00	236.24	354.36	472.48	590.60	708.71	944.95	1181.19	—	—		
合并或并发呼吸衰竭	0.00	283.59	425.39	567.19	708.99	850.78	1134.38	1417.97				
短暂性脑缺血发作（TIA）	1870.44	3079.60	3684.18	4288.76	4893.34	5497.92	6707.08	7916.24	6335.00	290.00	5135.17	3926.01
高血压	0.08	275.36	413.00	550.64	688.28	825.92	1101.20	1376.48				
糖尿病	382.86	460.98	500.04	539.11	578.17	617.23	695.35	773.48				
脑出血	2472.80	6022.56	7797.43	9572.31	11347.19	13122.07	16671.80	20221.58	13202.00	84.00	12944.57	9394.82
合并高血压	0.13	457.39	686.02	914.65	1143.28	1371.91	1829.17	2286.43	—	—		
合并或并发肺部感染	360.00	2120.88	3001.32	3881.76	4762.20	5642.64	7403.52	9164.40	—	—		
合并或并发癫痫	0.00	443.81	665.71	887.62	1109.52	1331.43	1775.24	2219.04	—	—		
合并糖尿病	570.58	714.67	786.72	858.76	930.81	1002.85	1146.95	1291.04	—	—		
合并或并发胆疝	18.08	71.07	97.57	124.06	150.56	177.05	230.04	283.03	—	—		
康复治疗	300.00	1958.80	2788.20	3617.60	4447.00	5276.40	6935.20	8594.00				
脑梗塞	1711.98	5463.35	7339.03	9214.72	11090.40	12966.09	16717.45	20468.82	8709.00	750.00	12215.81	8464.45
合并高血压	0.13	320.89	481.28	641.66	802.05	962.43	1283.20	1603.97	—	—		
合并或并发肺部感染	360.00	1573.92	2180.88	2787.84	3394.80	4001.76	5215.68	6429.60	—	—		
合并或并发癫痫	0.00	301.71	452.57	603.43	754.28	905.13	1206.85	1508.56	—	—		
合并糖尿病	570.58	637.03	670.27	703.49	736.73	769.95	836.41	902.87	—	—		
合并或并发胆疝	72.32	185.53	242.14	298.74	355.35	411.95	525.16	638.37	—	—		
康复治疗	300.00	1403.20	1954.80	2506.40	3058.00	3609.60	4712.80	5816.00				

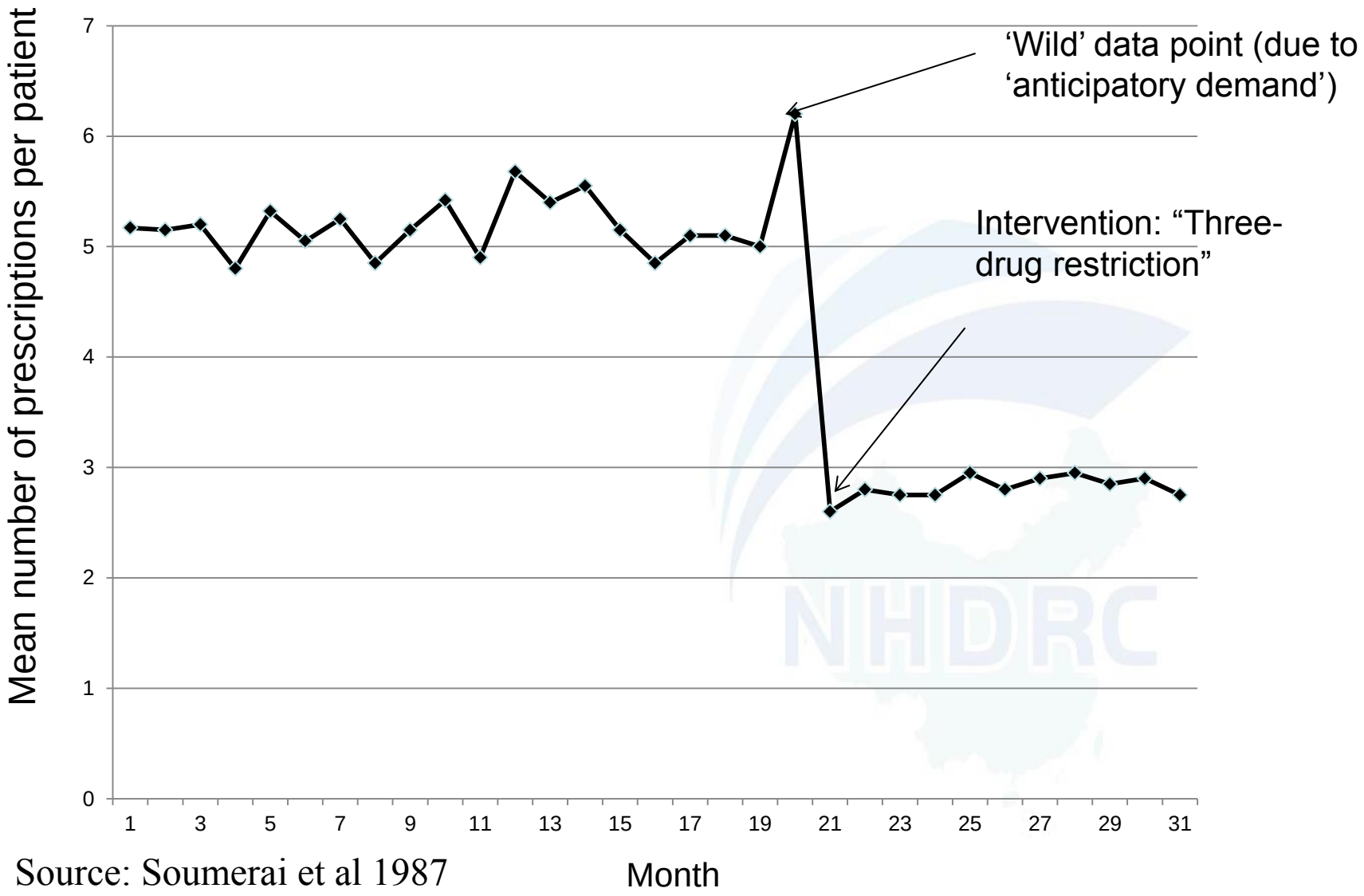
注：1. P80为2012年胶南市人民医院可以覆盖相应病种80%患者的人均费用水平

2. P80病例数为2012年胶南市人民医院相应病种病例数

3. 加权平均结果以下表格中各病种轻中重所占比例为系数，分别乘以40%、60%和80%可选项的测算结果，加权平均获得。

4. 3. 加权平均结果以下表格中各病种轻中重所占比例为系数，分别乘以20%、40%和60%可选项的测算结果，加权平均获得。

Interrupted time series analysis



Source: Soumerai et al 1987

Thanks and comments

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