CMB Collaborating Program on Health Economics and Policies

Fudan University

Shanghai

I. Title of Proposal

Improving evidence-based policy making through continuous health economics researches and findings dissemination

II. Investigators

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III. Proposal Abstract

During China's new health system reform, health economics and policy researches are necessary to provide the support for evidence-based decision making through continuous policy development and evaluation, which CMB has recently thrown enormous efforts to promote in China. This collaborating program will be expected to improve evidence-based policy making on procurement, pricing, and reimbursement of pharmaceuticals through continuous research team building, academic researches and findings dissemination as an influential think tank in the field of health economics and policies. Considering the complexity of health care reform in China, as the first phase, we would like to focus our research priority on pharmaceutical-related policy research field. Prior to this, an extended collaborating team networked with famous international and domestic universities as well as related government departments at central level will be established and strengthened. The Fudan-based research team will be led by Prof CHEN Wen and Prof YE Lu and be made up of 6 other scholars with different academic background. Capacity building will be strengthened through member recruitment, internal training, conference participation and abroad training. Collaborating network will be extended to include WHO, Harvard University, Oxford University, University Medical Center Groningen and Duke University. Domestic collaboration will be strengthened with Peking University, Shandong University, MHRSS, MOH, NDRC, and SFDA. Besides the project-based collaboration and policy review publications, the training workshops and symposiums on specific topics on China's health care reform and policies will be

co-organized with partner institutions. Co-authorship for peer-reviewed international papers will be encouraged and pursued.

As for project research, during the first three-year phase, the project tries to answer the following questions: Is there any difference of the impact of bidding systems on the price and quality of pharmaceuticals purchased? How many differences? Is there any value-based pricing method for innovative pharmaceuticals adapted to Chinese context? What are the elements for such methods if feasible? Which technical instrument can be adopted? What is the impact of zero-markup policy on pharmaceutical cost and rational use under the condition of unchanged health insurance payment mechanisms? What is the impact of health insurance global budget on pharmaceutical cost and rational use under China's health system context? Literature review, qualitative research, and evaluation research will be used as main methodologies. Research findings will be disseminated through symposiums and training workshops, policy briefings and policy review publications.

IV. Goal of the Project

The goal of the project at the first stage is to improve evidence-based policy making on procurement, pricing, and reimbursement of pharmaceuticals through continuous research team building, academic researches and findings dissemination as an influential think tank.

V. Objectives of the Project

- Strengthen networked collaboration on health economics and policy research;
- Assess the impact of existing bidding systems on pharmaceutical price and quality based on case studies and comparative analysis;
- Develop feasible value-based pricing methods for innovative pharmaceutical products;
- Evaluate the effect of hospital reimbursement mechanisms including health insurance global budget and zero-markup policy on pharmaceutical cost and rational use; and
- Disseminate research findings and train the decision makers through workshops and symposiums.

VI. Abbreviations or Acronyms

CMB…….China Medical Board

DRC……. Development and Reform Commission

DRGs……Diagnosis-related groups

MHRSS……Ministry of Human Resources and Social Security

MOE…….Ministry of Education

MOH…….Ministry of Health

NDRC……National Development and Reform Commission

NNSFC……..National Natural Science Foundation of China

SFDA……. State Food and Drug Administration

WHO……..World Health Organization

VII. Full Proposal

A. Background of the Proposal

China has been undergoing its profound national reform of health system since 2009, faced with the dramatically increasing healthcare demands and expenses. The contradiction between national demands for affordable health services with high quality and limited health resources unevenly distributed has driven the reform focusing on priorities of health security system, essential medicines policies, primary healthcare services delivery, public health services equality and public hospital reform [1]. During the reform practice, health economics and policy researches are necessary to provide the support for evidence-based decision making through continuous policy development and evaluation, which CMB has recently thrown enormous efforts to promote in China.

My team and I have engaged in health economics and policy researches for more than fifteen years and conducted over 30 projects funded by MHRSS, MOE, MOH, NNSFC, CMB, WHO and other organizations. Our collaborating team on health economics and policy research is not only multi-disciplinal, inter-institution and internationalized, but also establishes good relationships with the decision makers in health care, health insurance, pharmaceutical and finance fields. Considering the complexity of China's health care reform, as the first phase, we would like to focus our research priority on pharmaceutical-related policy research field. Prior to this, an extended collaborating team networked with famous international and domestic universities as well as related government departments will be firstly established and strengthened.

Although total health care expenditure has been modest relative to GDP (5.1% in 2009), pharmaceutical expenditures accounted for a substantial proportion, averaging over 40% during the past two decades in China [2]. In contrast, the average percentage in OECD countries was around 15% [3]. Despite higher pharmaceutical spending, China experiences substantial problems in access to and rational use of medicines, due to inappropriate policies arrangements on pharmaceutical procurement, pricing, and reimbursement [4]. Perverse financial incentives to service providers lie at the core of these problems. A large proportion of hospital revenue contributed by profits from pharmaceutical sales, often the most important source of income at county and lower level hospitals and health centers [5,6]. Service providers make greater profits on higher priced pharmaceuticals, since the mark-up rate is fixed by government regulation. Hence, Chinese doctors tend to overprescribe medicines, in particular expensive medicines, to maximize revenue generation for their institutions and bonus payments for themselves [6,7]. As a result, overprescribing of antibiotics and injections is particularly inappropriate, in light of global standards [8].

To guide the pharmaceutical sector, Chinese authorities have formulated a series of policies on pharmaceutical research and development, product approval, production, distribution, utilization, pricing, and insurance coverage [9]. Of these, price management and insurance coverage have been the two most important measures influencing availability and rational use of essential medicines. In China, many government departments have been mandated to take a responsibility for different aspects related to pharmaceutical policies. The State Food and Drug Administration (SFDA) is responsible for issuing product licenses and quality control. The Ministry of Health (MOH) takes a charge of rational use of medicines. The National Development and Reform Commission (NDRC) and the Development and Reform Commission (DRC) at provincial level regulate the prices of new products, based on technical information submitted by manufacturers. NDRC is responsible for managing prices of medicines on the list of 1,901 medicines (of which 823 are traditional Chinese medicines) reimbursable by urban health insurance schemes which MHRSS and local departments are responsible for, while the DRC manages prices of medicines on provincial lists. Controls on medicine pricing have been promulgated 27 times since 1997. However, the measures have not had significant impact in reducing financial burden for service users. The main reason is that manufacturers stop producing medicines that no longer yield targeted profits, whilst hospitals and doctors are not keen to use them for similar reasons [9-11].

Essential medicines policies, as one major component of China's new health reform initiatives, were employed to improve equitable access to essential medicines. In August 2009, the Ministry of Health issued a new National Essential Medicines List for primary health care institutions, consisting of 205 western generic medicines and 102 Chinese herbal preparations [12]. By 2012, all primary health care institutions with government subsidies in both urban and rural areas will be required to stock and dispense these essential medicines with zero markup between wholesale and retail prices. In the past, primary health care institutions are permitted to get a markup of 15% between wholesale and retail prices of pharmaceuticals to compensate the financial loss from medical care delivery because the fee schedule for medical care set by the government is lower than the actual cost. This policy arrangement has been demonstrated to provide the physicians who are the employees of primary health care institutions in China, an incentive to over-prescribe medicines. Under the new essential medicines policies, zero-markup policy aims to remove the markup revenue for primary health care institutions, which means primary health care institutions have to sell the medicines to the patient at purchasing price. No profit available from pharmaceutical sale will produce a de-incentive to over-prescribe medicines. Besides the policy arrangement, a retail price ceiling has been set by NDRC for each essential medicine and medicines with the same ingredient will have the same price, no matter whether the product is the originator, a branded generic, or a non-branded generic. A province-based public bidding system is required to build up to decrease the purchasing prices of pharmaceuticals for primary health care institutions and final retail prices for the users under zero-markup policy. However, great variations in practice on the bidding operation do exist among different provinces and regions. A scoring method was traditionally adopted in many provinces, based on the expert assessment on efficacy, safety, quality, prices and supply stability. The relative weight between quality and prices, to a large extent, has the influential on the winners of bidding. Recently, a new two-envelop method has been adopted in some provinces. For one certain group of generics, quality status (efficacy, safety and product quality) contained in the first envelop will be assessed independently to decide certain winners. Within the shortlisted products after quality bidding, the final winner(s) of bidding will then be decided only grounded on the comparison of prices contained in the second envelop. The two

bidding methods have produced different results. Till now, few studies have been found to measure the impact on price and quality of pharmaceuticals purchased and utilized.

On the other hand, the bidding system has been proven to be ineffective for purchasing innovative pharmaceutical products [13]. The value resulting from significant improvement on efficacy and safety relative to generic alternatives is difficult to be assessed and quantitatively measured under the current bidding system. The pricing of pharmaceuticals based on cost-plus method and technical information submitted by manufacturers led to the failure of government pricing management [13]. A new value-based pricing initiative for innovative products has been put forward in China's health reform plan. However, the guideline for the actual operation is not available, such as value evaluation techniques and appropriate cost-effectiveness ratio thresholds.

China's health insurance schemes, including urban employees' and residents' health insurance schemes and rural cooperative medical schemes, have been extended to cover more than 90 percent of population. As services purchasers, health insurance agents have relied more on contracting and prepayment mechanisms to increase services efficiency, quality and cost control. A national guideline on payment method reform has recently issued by MHRSS [14] to encourage local health insurance authorities to adopt prepayment mechanisms including DRGs, capitation and global budget. The empirical evidences are important for decision makers to understand the impact of payment reform on pharmaceutical cost and rational use.

The pharmaceutical policies field is my core research interest. In the past ten years, I, as PIs, have conducted many research projects on pharmaceutical policies funded by WHO, NDRC, MHRSS, MOH, and SFDA, etc. I am the unique health economist in the Steering Committee for the update of the national reimbursable drug list issued by MHRSS in 2009 and the member of the Consultant Expert Committee for Healthcare Reform appointed by MOH. I have established a collaborating network with the officials in health insurance, health and drug supervision fields, scholars from Fudan School of Pharmacy, other academic institutions and international institutions. In 2002, we have established the Center for Pharmacoeconomic Research and Evaluation, Fudan University to disseminate health technology assessment knowledge and strengthen the communication and collaboration with related stakeholders. A website on pharmacoeconomics and pharmaceutical policies has been established to disseminate our research findings. My team and I have earned good academic reputation and influence in pharmaceutical policies field.

During the first three-year phase, the project tries to answer the following questions:

- Is there any difference of the impact of bidding systems on the price and quality of pharmaceuticals purchased? How many differences?
- Is there any value-based pricing method for innovative pharmaceuticals adapted to Chinese context? What are the elements for such methods if feasible? Which technical instrument can be adopted?
- What is the impact of zero-markup policy on pharmaceutical cost and rational use under the condition of unchanged health insurance payment mechanisms?
- What is the impact of health insurance global budget on pharmaceutical cost and rational use under China's health system context?

B. Methods to Carry out Proposal

STRENGTHEN NETWORKED COLLABORATION ON HEALTH ECONOMICS AND POLICY RESEARCH

Based on the current collaborating partners, a new collaborating network will be extended to include WHO, Harvard University, Oxford University, University Medical Center Groningen and Duke University. Domestic collaboration will be strengthened with Peking University, Shandong University, MHRSS, MOH, NDRC, and SFDA. Potential collaboration will be established with London School of Hygiene and Tropical Medicine, London School of Economics, the University of York, and HAI (Health Action International) Global. The core international collaborating scholars are as follows:

- Professor William Hsiao, Harvard School of Public Health
- Dr Richard Laing, Coordinator, Medicine Information and Evidence for Policy, WHO
- Dr Winnie Yip, Reader in Economics for Health Policy, University of Oxford
- Professor Dennis Ross-Degnan and Professor Anita Wagner, Harvard Medical School and Harvard Pilgrim Health Care Institute
- Professor Tang Shenglan, Duke University
- Professor Flora Haaijer-Ruskamp, University Medical Center Groningen

Domestic collaboration will be further extended and strengthened to include the following academic institutions and government departments:

- Peking University School of Public Health
- Shandong University School of Public Health
- Division of Health Insurance, MHRSS
- Division of Pharmaceutical Policies and Essential Medicines System, MOH
- Center for Pharmaceutical Price Review, NDRC
- Division of Policy and Legislation, SFDA

Besides the project-based collaboration and policy review publications, we will co-organize the training workshops and symposiums on specific topics on China's health care reform and policies with partner institutions. Co-authorship for peer-reviewed international papers will be encouraged and pursued.

Besides international and domestic collaboration, the Fudan-based research team will be led by Prof CHEN Wen (PI) and Prof YE Lu (Co-PI) and be made up of 3 scholars respectively from the Schools of Pharmacy, Law, and Business and 3 young scholars from the School of Public Health. Long-range program vision and good team reputation are generated while "win-win" strategies are conducted to absorb first-class overseas talents to enrich the research team. All core members will join the project research and findings dissemination activities. International academic communication through conference participation and short-term training home and abroad will be strengthened and funded by the project, especially for the young scholars. Joint-PhD programs will be launched in collaboration with international top academic institutions to foster young scholars'

research competence. All members are also encouraged to apply for other CMB-funded projects to upgrade capacity. The project will recruit post doctors each year as new team members, afterwards those qualified fellows can be promoted as faculty members. Two research assistants chosen from PhD or Master degree candidates will be funded and one project secretary will be hired by the project. Team-wide training workshops and discussions will be regularly conducted.

ASSESS THE IMPACT OF EXISTING BIDDING SYSTEMS ON PHARMACEUTICAL PRICE AND QUALITY BASED ON CASE STUDIES AND COMPARATIVE ANALYSIS

The research team has conducted a project on the implementation of China's essential medicines policy funded by MOH to understand the current situation of essential medicines bidding, procurement, utilization and reimbursement. Questionnaire surveys for primary health care institutions, physicians and prescription have been completed. Two main categories of bidding systems from diverse operations among provinces have been identified, including scoring-based bidding and two-envelop bidding methods. Within this project, case studies in 3-4 provinces will be conducted to review all aspects of two bidding systems and the impact on pharmaceutical price and quality. Pharmaceutical purchasing prices based on different bidding systems will be collected and compared among provinces. The factors influencing the price differences will be surveyed through key informant interviews with related department officials, industry representatives, and hospital managers. Physician focus group discussion and questionnaire surveys will be conducted to understand pharmaceutical quality situation. The research questions to be answered here are: Is there any difference of the impact of bidding systems on the price and quality of pharmaceuticals purchased and utilized? What are the preconditions for different bidding systems? What are the keys to operate different bidding systems?

- **Literature review**. Literature related to pharmaceutical bidding and procurement will be searched, retrieved and synthesized to understand the categories of bidding systems and possible effectiveness in other countries and regions and current situation on researches and operation practices in China. International and domestic publications, grey reports and policy documents will be included.
- **Qualitative research**. Case studies will be conducted in 3-4 provinces, possibly including Anhui, Chongqing, Shanghai, Ningxia, where pharmaceutical bidding systems are regarded as typical. The departments in charge of pharmaceutical bidding policy and operation at province level will be visited and key informant interviews will be conducted. Bureau of health, health insurance authority, and hospitals at city level will be visited to understand the impact of bidding system on pharmaceutical price and quality through focus group discussion and questionnaire surveys. The possible influencing factors will be identified. 2 cities within each province and 5 hospitals in each city will be chosen for the survey.
- **Comparative analysis**. Based on case studies, a comparison of expert scoring based bidding method with two-envelop bidding method will be conducted to summarize the characteristics of pharmaceutical bidding systems and operation methods in provinces. Strengths and weaknesses will be identified. Feasible policy recommendations will be put forward for the central and provincial government decision-makers based on research findings dissemination and workshops.
- The duration for the topic research will be 1.5 years.

DEVELOP FEASIBLE VALUE-BASED PRICING METHODS FOR INNOVATIVE PHARMACEUTICAL PRODUCTS

Value-based pricing has been regarded as China's choice for pharmaceutical pricing as announced by new government policy document. This development trend is consistent with that in developed countries including Australia, Canada, and UK. In the past years, we have conducted some projects funded by NDRC to explore the possibility of value-based pricing for pharmaceuticals and how to introduce health technology assessment or pharmacoeconomics techniques into pricing management. Within the project, the research questions to be answered are: Is there any value-based pricing method for innovative pharmaceuticals adapted to Chinese context? What are the elements for such method if feasible? Which technical instrument should be taken?

- **Literature review**. Although international experience has been summarized in the past projects, new progresses on pharmaceutical pricing management in Australia, Canada, UK, Germany, France, Sweden, Koreas and Taiwan will be traced, especially on the discussion and research of value-based pricing transformed from profit control for pharmaceuticals in UK. International and domestic publications, grey reports and policy documents will be included.
- **Qualitative research**. A value-based pricing method will be developed based on international models and Delphi method and assessed under China's health system context. A certain pharmaceutical product (e.g. targeted oncology product, diabetes medication) will be chosen as a case. Both traditional cost-plus pricing and value-based pricing methods will be adopted to testify the feasibility of new value-based pricing and possible impact produced for the industry, clinical utilization and health insurance budget based on stakeholder analysis. Health economics evaluation techniques and budget impact analysis will be employed within case study. Policy recommendations related will be put forward.
- The duration for the topic research will be 1 year.

EVALUATE THE EFFECT OF HOSPITAL REIMBURSEMENT MECHANISMS INCLUDING HEALTH INSURANCE GLOBAL BUDGET AND ZERO-MARKUP POLICY ON PHARMACEUTICAL COST AND RATIONAL USE

The research questions to be answered include: What is the impact of zero-markup policy on pharmaceutical cost and rational use under the condition of unchanged health insurance payment mechanisms? What is the impact of health insurance global budget on pharmaceutical cost and rational utilization under China's health system context? The following methods will be employed.

- **Evaluation research for zero-markup policy under the condition of unchanged health insurance payment mechanisms.** Based on prescription surveys conducted in 2008 and 2011 as parts of the National Household Health Services Survey, the comparison of average medicine cost per prescription and prescribing indicators, e.g. the average number of injections prescribed per patient prescription, average number of injections per prescription for prescriptions containing one or more injections will be conducted between 2008 and 2011 to reflect the change before and after implementing zero-markup policy. The time to implement zero-markup policy for every primary health institution will be identified according to institution survey in 2011. Then the difference-in-difference method will be used to measure the net impact of zero-

markup policy on pharmaceutical cost and rational use. All databases have been completed in the project funded by MOH. This project will use these available databases for the topic research uncovered by the past project.

- **Evaluation research for health insurance global budget**. Global budget, as an important prepayment method for hospital services, has been extensively adopted in urban health insurance schemes. Shanghai and Hangzhou are the typical cities on this aspect. Health insurance claims data will be employed to analyze the impact of prepayment mechanisms on pharmaceutical cost and rational use in two cities. 10 tertiary hospitals have been chosen for global budget two years ago in Shanghai. The project will select 3 of the 10 hospital as research group. Another 3 tertiary hospitals without implementing global budget will be chosen as control group. A difference-in-difference method will be employed to measure the effectiveness of global budget mechanism. Several common diseases will be selected as proxy diseases. Medication expenditure and appropriateness will be assessed and compared by an expert group to measure the impact on pharmaceutical cost and rational use. Due to the global budget mechanism covered all hospitals in Hangzhou, the control group will not be able to be selected. A before-and-after comparison will be conducted. The comparison between Shanghai and Hangzhou will also be possibly conducted, considering the similarity of health services mode. The time span of claims data collected will be discussed with local health insurance authorities.
- The duration for the topic research will last for 1.5 years.

DISSEMINATE RESEARCH FINDINGS AND TRAIN THE DECISION MAKERS THROUGH WORKSHOPS AND SYMPOSIUMS

- One symposium in every year will be organized and held, collaborated with partner institutions. The topic will be decided according to discussion with partner institutions and research findings. All research findings will be disseminated within these symposiums. Collaborating research partners will be invited to present the keynotes. 130-150 persons from different stakeholders such as government officials, researchers from academics, industry representatives will be expected to join each symposium.
- All research findings will be published on international and domestic peer-reviewed journals. Co-authorships with collaborating research partners will be encouraged and pursued.
- Policy briefings for every topic research will be submitted to related government departments and published on our own professional website.
- Policy reviews on specific topics based on secondary literature and project research findings will be published as white books. Certain policy reviews will be conducted by domestic collaborating institutions.
- Two training workshops will be organized for the officials from central and provincial government departments. The topics possibly include value-based pricing and health insurance prepayment methods. Collaborating partners will be invited as speakers. Each training workshop will last two to three days to cover specific technical and policy sessions. 30 officials will be expected to participate in each training workshop.

- Research team members will be funded to attend the international conferences to present research findings and strengthen the academic communication with international academic institutions.

C. Project Tasks, Timeline and Milestones

Tasks	**Q1 2012**	**Q2 2012**	**Q3 2012**	**Q4 2012**	**Q1 2013**	**Q2 2013**	**Q3 2013**	**Q4 2013**	**Q1 2014**	**Q2 2014**	**Q3 2014**	**Q4 2014**
Collaborating network and team building	√	√	√	√	√	√	√	√	√	√	√	√
Bidding systems	√	√	√	√	√	√						
Literature review	√	√										
Case studies		√	√	√								
Analysis				√	√							
Report					√	√						
Value-based pricing			√	√	√	√						
Literature review			√	√								
Qualitative res.				√	√							
Report					√	√						
Impact evaluation												
Zero-markup policy					√	√						
Global budget												
Data retrieving						√	√					
analysis							√	√	√			
Report									√	√		
Symposiums				√				√			√	
Training workshops						√				√		

D. Monitoring and Evaluation

- A collaborating network with research partners and related government departments representatives
- Research partners will join the research collaboration and symposiums/training workshops
- Co-authorships for international papers with research partners
- Literature reviews on pharmaceutical bidding system and pricing management
- A research report on comparison analysis of bidding systems in 4-5 provinces
- A research report on the feasibility analysis of value-based pricing
- A research report on the impact of zero-markup policy on pharmaceutical cost and rational use
- A research report on the impact of health insurance global budget on pharmaceutical cost and rational use
- Policy briefings and reviews on specific topic research
- Symposiums on specific topics (130-150 participants for each symposium)
- Training workshops for officials (30 attendees for each workshop)

E. Outcomes and Applications

- All research findings will be disseminated within symposiums on specific topics. Collaborating research partners will be invited to present the keynotes.
- All research findings will be published on international and domestic peer-reviewed journals. Co-authorships with collaborating research partners will be encouraged and pursued.
- Policy briefings for every topic research will be submitted to related government departments and published on professional websites.
- Policy reviews on specific topics will be published.
- Two training workshops will be organized for the officials from central and provincial government departments. The topics possibly cover value-based pricing and health insurance prepayment methods. Collaborating partners will be invited as speakers.
- Research team, collaborated with research partners, will apply for health economics and policy research from international and domestic foundations.
- Research team members will be funded to attend the international conferences to present research findings and strengthen the academic communication with international academic institutions.

VIII. Budget (US$)

Budget Category	2012	2013	2014	Total
Personnel Costs [1]	15,000	15,000	15,000	45,000
Equipment	-	-	-	-
Operating Expenses [2]:				
• Office Supplies	15,000	15,000	15,000	45,000
Travel:				
• Domestic [3]	20,000	20,000	10,000	50,000
• Foreign [4]	20,000	15,000	20,000	55,000
Consultants [5]	8,000	5,000	3,000	16,000
Conferences [6]	20,000	27,000	30,000	77,000
Evaluations [7]	-	-	2,000	2,000
Publications/Dissemination [8]	2,000	3,000	5,000	10,000
Administrative Cost	-	-	-	
Grand Total	100,000	100,000	100,000	300,000

1. Allowance for two research assistants and one project secretary. US$3,500 per year per research assistant who is responsible for literature collection and summary, data retrieving, cleaning, analysis and management, qualitative data recording, cleaning and summary, questionnaire designing, pretest and field survey. US$8,000 per year is used to hire the project secretary who is in charge of project management, contacting collaborating partners, and symposiums/workshops designing and organization.

2. Communication, review, layout, printing, publishing, and all other logistics. US$1,250 per month.

3. Domestic travel for project discussion and field survey (case studies) for all research team members. Estimated 20 times travels in the first and second year. US$1,000 per travel per person. Estimated 10 times travel in the last year.

4. Totally four person-times in the first and third year and three person-times in the second year for international travel to participate in academic communication for team members or visiting China for collaborating research partners. US$5,000 per travel per person.

5. Consultant fee for both domestic and international experts within the project.

6. One symposium in the first year. One symposium and one training workshop in the second and third year. Estimated US$20,000 per symposium and US$10,000 per workshop. For symposium, US$10,000 for two-day conference room and logistics, US$8,000 for speakers and US$2,000 for materials and other costs. For workshop, US$5,000 for workshop room and logistics, US$4,000 for speakers and US$1,000 for materials and other costs.

7. One-day self-evaluation for the project with external experts invited. All research reports and process will be reviewed.

8. Paper publication and policy briefings dissemination.

IX. Other Monetary Support

We have obtained a fund of US$35,000 from MOH for the prescription survey and institution survey in 2011. The MOH project began from October 2010 and completed in the middle of 2011. The database established in the project will provide the base for data analysis in CMB-funded project. The impact of zero-markup policy on pharmaceutical cost and rational use is not covered by the MOH project which only shows the cross-sectional situation of pharmaceutical utilization.

X. Miscellaneous

None

XI. Curriculum Vitae (*cv*)

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XIII. Appendices

None

复旦大学公共卫生学院
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研究课题： 通过持续的卫生经济学研究和研究结果传播推进循证决策

课题负责人： 陈文 教授， 复旦大学公共卫生学院

复旦大学公共卫生学院医学研究伦理委员会于2011年7月13 日批准了陈文教授有关《通过持续的卫生经济学研究和研究结果传播推进循证决策》的伦理学申请。批准号为 IRB #2011-07-0314，有效期为壹年。

复旦大学公共卫生学院医学研究伦理委员会

国际注册号：IRB00002408 & FWA00002399

2011 年 7 月 13 日