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Policy and Technology Evaluation of "Healthy China 2020"
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Synthesis

The Policy and Technology Evaluation of "Healthy China 2020" is a two-year project launched in March 2010 by the China National Health Development Research Center (CNHDRC), Ministry of Health, China and the International Development Research Center (IDRC), Canada. The project has two linking components: capacity building in health evaluation and health indicator system for "Healthy China 2020". Detailed introduction of the project and activity plan can be found in the original project proposal.

Implementation and progress

At the end of July 2012, the project has been completed as planned, and all objectives were fully achieved. During the second project year, we have taken lots of efforts in conducting activities with financial support from IDRC. The main capacity building activities conducted were a five-day health policy evaluation workshop held in Beijing from 24th to 28th August, 2011, a four-month International visiting scholar program for two Chinese researchers (one at each time) from CNHDRC between Oct, 2011 and Feb, 2012, and a one-month International visiting scholar program for five Chinese policy makers from the Ministry of Health (MoH) and provincial health authorities from Oct to Nov, 2011. Furthermore, an updated conceptual framework of the M & E indicator system for "Healthy China 2010" has been developed as scheduled.

Outputs and deliverables

- A Chinese health policy and technology evaluation network set up in the first capacity building workshop in 2010 has been strengthened and expanded after the third health policy evaluation workshop, which is composed of health policy makers, health policy evaluators and health development practitioners in various fields who are aiming to improve their health policy and technology evaluation skills;
- Communication mechanism and strategy between local practitioners, Chinese health evaluators and international mentors were developed. Regular

teleconferences and Skype talks were conducted to facilitate mentoring and capacity building efforts;

- A bilingual webpage on health evaluation capacity component has been developed to promote communications among trainees, trainers and other stakeholders;
- Five papers meant for international publications were prepared by some of the trainees and CNHDRC researchers. The papers are currently under review by the international mentors.
- A conceptual framework of the indicator system for "Healthy China 2020" was developed by the CNHDRC research team.

Impacts

- A five-day health policy evaluation workshop was held in Beijing from 24th to 28th August, 2011

  By participating in two health policy evaluation training workshop and one-year mentoring program, the trainees, including both officers and evaluators, have developed evaluation skills and deepened their understandings of evaluation and relevant methods. Centered on topics related to issues that of great relevance to the trainees, such as development evaluation, outcome mapping, health equity, economic evaluation and skills of data analysis, the workshops achieved better effects in helping the workshop participants to handle practical evaluation work in their daily work. Some trainees were invited to share some practical cases from their daily works and the trainers used the cases to demonstrate how to apply concepts and skills they learnt. They said that the training make their current evaluation works more reliable, and they are clear about how important health equity is for health technology evaluation and how to design an appropriate evaluation with multiple considerations. The workshops also provided the trainees with a good chance to exchange opinions of practical evaluation issues, esp. for those multi-level policy makers, evaluators and grass root practitioners. The set-up of an all-involved evaluation community not only provided theoretical knowledge and evaluation skills for local practitioner, but also serves as a consensus-building platform for policy makers and evaluators. Generally, many trainees said the stuff learned challenged their old thinking of evaluation, which is good for them to develop a more comprehensive framework for conducting evaluation in the

Chinese context. Last but not least is the evaluation network coordinated by CNHDRC. It has been greatly strengthened after three rounds of capacity building workshops. More and more key health stakeholders were informed and get involved. In addition, this network has liaised with some existing agencies in the field of health evaluation and developed under multidisciplinary and cross-sectional partnership.

- An updated conceptual framework of the indicator system for "Healthy China 2020"

  As one of main achievements of project year two, an updated conceptual framework of the indicator system for "Healthy China 2020" has been developed by CNHDRC researchers and reviewed by IDRC mentors, whose aims are to establish a conceptual evaluation framework for mid-term and short-term development of the Chinese healthcare system ("Healthy China 2020") and set up an indicator system, so as to prepare for the development of a systematic evaluation framework for healthcare system in China. In specific, the indicator system consists of four major principles: pertinence, comparability, feasibility, sustainability, and five phases which are context, theory, process, outcome and impact. And above all, equity plays the role of central axis from beginning to end. The rationale behind the theoretical framework is that China healthcare sector encompasses a complex, dynamic and evolving system undergoing rapid changes in a transitional context featured with multiple actors and networks, financial decentralization, unbalanced regional development, urbanized resource and labor concentration, and people's growing expectation, then the project attempts to set up a seasonable indicator system which can support the dynamics of innovation and explore the right model for future development by tracking emergent and changing realities and feedback evaluation results in real time, then policy makers can adjust and optimize the current policies or strategies timely. In the application, the innovation of such indicator system was adopted by MoH as an alternative tool to evaluate the health reform and development during the ongoing 12th five year plan of national health development since the concept employment of development evaluation introduced by IDRC mentors.

- The Third Canada-China Health Policy Dialogue, Toronto, 26th -27th Sep. 2011

  CNHDRC research team was invited to attend the 3rd Canada-China health policy dialogue and respective Canada-China Joint Committee meeting due to the positive influence of the preceding health evaluation capacity building workshop. The Chinese Health Minister Chen Zhu considered the project as a good model of collaboration between the two health systems in his opening speech. Furthermore, on behalf of Chinese delegation, the deputy director of CNHDRC, Prof Hongwei Yang, delivered a short speech in the field of the financing in China rural health, and communicated with Canadian counterparts during the formal policy dialogue. During the visit, CNHDRC delegation has also visited IDRC to report the project going and deepen the collaboration relationship with IDRC. Afterwards, IDRC representatives and CNHDRC delegation attended the high-level health policy dialogue and further the project dissemination together. These actions has promoted the project to earn broad admirations among senior policy makers both in China and Canada.

- One-month international visiting scholar program for five policy makers from Ministry of Health and provincial health authorities, Toronto, Oct-Nov, 2011

  In order to better understand the health policy evaluation mechanism and practices in Canada, five Chinese policy makers from MoH and provincial health authorities took part in a series of workshops and meetings with corresponding Canadian policy makers and HTA researchers to raise their awareness of evidence-based decision making and discuss the transaction mechanism between HTA & policy evaluation findings and decision making. Moreover, the Canadian partners also arranged the trips to visit local community health center and local hospital to investigate the practical benefits brought about by HTA activities. As a result, those multi-dimension and in-depth investigations had impact on the Chinese policy makers, not only in terms of awareness-building, but also understanding potential use of HTA results. Those policy makers reflected that they were quite impressed by applications of HTA and policy evaluations results in Canada and keen to use findings of HTA and policy evaluation in their daily work, but with technical assistance by CNHDRC and International experts if necessary. One of the visiting policy makers is working in the Department of

Health Planning and Financing, MoH. He is in charge of the drafting of the National 12th Five-year Plan for Health Development. After the study tour, he has entrusted CNHDRC to do evaluation of the 12th Five-year Plan. During their stay, potential topics for phased-2 project were proposed by CNHDRC and IDRC researchers and finalized with their contributions. Now the proposal for phase-2 study is under review by IDRC program officer. Their experiences and needs in accordance with policy evaluation make the proposal become more practical and goal-oriented.

- Four-month international visiting scholar program for two researchers from CNHDRC, Toronto, Oct, 2011-Feb, 2012

  Two researchers from CNHDRC visited academic institutions in Canada as planned. Main institutions include University of McMaster (UM), University of Toronto (UT) and University of Waterloo (UW) respectively. The two researchers took a systematic academic training course in the major subjects of health economics and economics evaluation methods for health service research, including the demand for and production of health, nature of health care as an economic commodity, demand for health care, demand for health care insurance, insurance market, systems of health care finance, funding and remuneration, physicians and their practices, health care institutions, pharmaceuticals, costing concepts, methods and data sources, cost effectiveness analysis, cost utility analysis, cost benefit analysis, economics evaluation using decision analytic modeling, uncertainty, sensitivity analysis, and valuation of information, budget impact analysis, etc. Although the three previous capacity building workshops have delivered the basic concepts and fundamental theories to trainees, the systematic training helped two visiting researchers to gain deeper understandings of these concepts and theories. One positive impact is that researcher can take this opportunity to generalize and summarize a comprehensive knowledge system of health economics and economics evaluation learnt before. Secondly, in accordance with the discussions with mentors on practical projects, the researcher can achieve learning by doing in practice which can enhance the understanding of academic theories and skills preferably. Except that, the researchers are invited to join the variable evaluation workshops held by different corresponding Canadian research institutes, in which can broaden the academic view, contact with advanced

knowledge and communicate with assorted counterparts from all over the world. Later on, these researchers can play the mentor role to further the capacity building of policy evaluation in China.

Next step

- At the end of Jul 2012, phase one of this bilateral project has come to an end, with all objectives fully achieved. Based on the good progress and foundation of collaboration between CNHDRC and IDRC, IDRC is willing to continue to fund the phase 2 project. Currently, a project proposal has been developed by CNHDRC and Canadian partner-TECCHI and submitted IDRC management. In short, the phase-2 project will focus on equity-orientated evaluation and creating national evaluation guidelines, and working towards a culture of equity-shaped evaluation and equity-oriented policymaking in health care. Phase two will take approximately 3 years and will be developed & implemented through collaborations with TECCHI,the UW, Chinese woman economics group and Chinese universities. Once approved by IDRC, phase-2 project will be launched soon as scheduled.
- The editor of Journal of Health Planning and Evaluation is very interested in the project and decided to set up a China Forum in the journal to host the Chinese learners' papers on evaluation of their ongoing projects. Through the several rounds of opinion exchange between authors and Canadian partners who play the role of reviewing in the progress, the five papers are suffering the final stage of optimization.
- In the transition stage from closing of phase one and applying of phase two, CNHDRC will receive two officers from IDRC regional office-- Mr. Roger and Mr. Wilfredo. They two will meet the financial officer of CNHDRC to conduct the regular pre-assessment of beneficiary institute. The research team need to assist to get a translated version of the full documents available during the time of the visit.

The research problem

To ensure the success of the proposed healthcare reform, the government needs to

know if the new health reform policy is implemented as planned and if the expected objectives are achieved. Therefore, the implementation process and outcome evaluation of the new policies becomes a high profile concern. However, China is the late comer to the field of health policy evaluation, and there is no strong technical and organizational strength for doing relevant work in this field.

Major challenges in conducting evaluations in China include the following:

- No systematic evaluation of health policies and health interventions has been done at provincial or national level;
- No institutions or expert teams have been established for specialized work on health policy and technology evaluation;
- There has not been a systematic focus on enhancing the evaluation capacity of both the government and academic sectors;
- The approaches used by prior clinical and pharmaceutical evaluations done by several institutions and scholars are not based on the most recent evaluation theory and methods.

If the capacity of evaluation cannot be strengthened in a timely way, the ability to assess the impacts of the proposed reform will be seriously impaired. CNHDRC, which is under the leadership of MoH is responsible for providing the governments with the consultancy in the area of health policy research and evaluation and playing a leading role in the same area in China. Therefore, CNHDRC would like to undertake a capacity-strengthening project to support the CNHDRC team and local policy-makers.

Five areas (components) of need are foreseen since Chinese issued the new round of health sector reform plan:

- Capacity-building in the area of health evaluation
- The development of health indicators to accompany the “Healthy China 2020” strategic plan
- Evaluation of policies and implementation of “Healthy China 2020”
- Evaluation of the progress and outcome of “Healthy China 2020” using the set of indicators developed, and disseminating the results

- Research and evaluation of health technologies and pharmaceuticals in the Chinese context

According to the needs in the area of health policy evaluation and technology assessment, we are planning the five-year project with 2 phases. The phase I is a two-year project aiming at 1) building the capacity of the health policy evaluation among the Chinese researchers and policy makers; 2) setting up the indicators for the "Healthy China 2020". The phase I project focuses on component one and two only, which will form the basis for future undertaking of the other three components. The phase II, covering three years, will not only evaluate the policies and implementation of "Healthy China 2020" in practice by using the indicators and evaluation guidelines, but also focus on continuing to build evaluation capacity within China while working towards a culture of equity-shaped evaluation and equity-oriented policymaking in health care. The outcomes of three-year projects are not only the policy recommendation for the ongoing policy implementation but also the most improvement of evaluation capacity. We expect Chinese researchers are not only able to evaluate the health policy and technology alone but also become principal trainers training researchers in local universities at the end of the 5-year project; in addition, through the 5-year project policy makers are aware of the importance of evidence-based policy making. All of those are to ensure the evaluation of Healthy China policy is sustainable.

Research findings

The overall objectives of project are:

- To enhance the health officials and researchers' capacity to conduct the evaluation of the new round of health system reforms in China;
- To enable CNHDRC to become the leading center for conducting evaluations and building evaluation capacity in China;
- To assist CNHDRC to develop a set of health indicators for the "Healthy China 2020", which should be scientifically valid, systematic, complete, equitable and sensitive;
- To assist CNHDRC to establish the methods to link the existing databases and extract data with the set of health indicators selected, in order to enable the

collected data analysis to assist policymakers.

The objectives of component two, creating a set of indicators to accompany "Healthy China 2020" are:

- To provide technical support in the development of health indicators to accompany "Healthy China 2020"
- To provide technical support in setting up appropriate evaluation approaches and skills in doing policy evaluation and economic evaluation

To achieve the overall objectives and specific objectives of component two, CNHDRC organized a five-day health evaluation workshop to strengthen awareness, knowledge and skills of participants including both policy makers and researchers on the principles, role and methods of policy evaluation with the help of International mentors. One thing to pay more attention rather than the previous two capacity building workshops is that the introduction of concept of health equity. Furthermore, based on discussion with the trainees, we have seen that trainees' capacity in evaluation has been improved significantly. At the same time, the trainees also hoped to learn more methods for conducting equity analysis in the health care. At the end of workshop, there was a session to collect the feedbacks among trainees. At that time, the application of the phase two project was still waiting for IDRC's reply, so more than 50% of trainees expressed their worries about the continuation of the training, for they hoped to continue to attend such policy evaluation workshops. It demonstrates that the trainees have strong desire to conduct health policy evaluation in China. The one-year mentoring program and oversea study tour helped CNHDRC evaluators and senior Chinese policy makers to improve the awareness of significance and importance regards to evidence-based making mechanism and further the evaluation skills through the communications with Canadian counterparts and academic training course taken. Before the trip, one policy maker from MoH who is in charge of the national community health was confusing with the evaluation dimensions of national development of community health center. During the visit, by having discussions with Canadian counterparts and mentors, he made clear about the evaluation scope, dimensions and data requirements, etc. This shows that the policy makers really need the evidences to improve policy making process, but they do not know how and where

to find corresponding right way and right persons. Except the achievements mentioned above, the innovation of the indicator system for “Healthy China 2020” whose core idea is development evaluation introduced by IDRC mentor provide a new alternative tool for assessing the short and middle term reform and development of the health system in time. In the past Chinese evaluation has mostly depends on linear logic models to conceptualize and examine a project’s logic model or theory of change, while recent years have seen an emerging trend that more emphasis on use of systems thinking and complexity science as frameworks for evaluation. The new trend shows that real-world policy or program is viewed as complex adaptive systems, with many systems entangling together and influencing each other. Then developmental evaluation method is more helpful in the context of social innovation where there is not a fixed model being improved (as in formative evaluation) or tested (as in summative evaluation). The current health reform and development in China mimics a big social innovation in its own right. Meanwhile, the environment is too complex and changing too fast for the model of practice ever to be fixed in the transitional context. In such a situation, developmental evaluation can help us do so-called "vision-directed reality testing". By tracking emergent and changing realities and feedback evaluation results in real time can we support the dynamics of innovation and explore the right model for future development. By evaluating the short- and midterm health reform and development, we can learn more about the correctness of the vision held by the innovators and find the right track, rather than test a predetermined model and gauge the success. Moreover, As the particular interest on the second and third Canada-China Health Policy Dialogue, the Canadian Minister of Health Leona Aglukkaq and the Chinese Minister of Health Chen Zhu agreed that this project has been the best collaborative health project between the two nations up to this day because of the positive influences caused. Their affirmations make CNHDRC become the leading role in the field of conducting evaluations and building evaluation capacity in China.

Project implementation and management

Project Implementation

All the activities covered by the reporting period were implemented as planned along

the timeline. Based on the achievements obtained from project year one, project year two attracted more attention. Besides sending mentors more materials about the Chinese basic health service delivery system, CNHDRC also invited the mentor (Dr. Sanjeev Sridharans) and IDRC project officer (Dr. Marie-Gloriose Ingabire) to visit the trainees on site to investigate and indicate their ongoing evaluation projects practically. For example, in Sep 2011, Dr. Sanjeev and Dr. Marie visited the trainee Mr. YunXin Hou who is in charge of New Cooperative Medical Scheme (NCMS) in Hanbin district, Ankang city, Shannxi province to realize the practical problems Mr. Hou met in his evaluation project during the using of knowledge and skills learned in capacity building workshops. Half a year later, their suggestions in equity dimension and data analysis helped Mr. Hou to identify issues with local health delivering and potential fields for improvement. Such interactive and following-up movement provides a good approach to strengthen trainees' capacity building linking between theory and practice. This case shows that the project was not only implemented as scheduled, but also achieved surprisingly good results. All the participants of these capacity building activities appreciated the efforts by the IDRC consultants Dr. Fred Carden and project officer Dr. Marie-Gloriose Ingabire, also the evaluation expert Dr. Sanjeev Sridharan from TECCHI. Their strong sense of responsibility and professional wisdom led the trainees into an interesting evaluation world. They also helped to keep the project on the right track.

Project Management

Since the launch of the project, two designated persons (Kun Zhao and Wudong Guo) from CNHDRC team have worked as project coordinator and assistant to manage the project. Their main responsibilities include overseeing the implementation of project, discussing with learners to get their feedback and learning needs, communicating with IDRC project officer and consultants as well as Canadian partners such as TECCHI, UT,THETA and UW, assistant consultants with webpage development and corresponding logistic issues. Meanwhile, CNHDRC opened an account for the project and made a requirement that all reimbursement documents have to be approved by the coordinator with two witnesses.

CNHDRC directors and the project coordinator held regular meetings, on which the

coordinator reported the project progress and results, so that the CNHDRC directors could monitor the project process to keep the project on track. At the end of Feb, 2012, CNHDRC held an annual project management meeting for all the projects run by CNHDRC, in which the project coordinator presented the progress, findings, future plans, financial source and expenditures of this project.

CNHDRC is a national research institute experienced in project management. This project being the first collaboration initiative with IDRC is also an opportunity to strengthen the collaboration. The main management issue that affected the project in year one is un-matching between our budget lines and the ones in IDRC financial accounting kit.

In communications with corresponding IDRC project officer and evaluation consultants, there are two minor research problems on which we engaged too much efforts from the project management point of view. First, the increase of the number of trainees and addition of some necessary activities caused the budget constraint in some categories. There were gaps between the original budget category and actual expenses. Secondly, according to the grant agreement between IDRC and CNHDRC, the estimated time for completion has been revised to 29, July 2012, that is why the activity—oversea study should be incurred in year one work plan has been delayed into this project year. Since the same reason, please take this technical report as the second interim project report.

Project outputs and dissemination

Project outputs

As the description above, the major project outputs include a Chinese network of health policy and technology evaluators, a five-day health evaluation capacity building workshop, maintenance of a bilingual evaluation webpage, a short-term oversea mentoring program of policy makers and researchers and the conceptual framework of health indicator of “Healthy China 2020”. Followings are the details of the outputs. First of all, around 50 participants of health evaluation capacity building workshop with different backgrounds are beyond our expectation (the original plan is

30 participants). In addition, all the training process of workshops has been recorded and courseware made into CD-ROMs for wider disseminations. Secondly, the webpage for capacity building component contains all learning material of five-day health evaluation workshop before and after. Thirdly, during the short-term oversea mentoring program, the trainees has set a communication mechanism with foreign counterparts by using on-line chatting scheme, so that the policy makers from MoH and provincial health authorities CNHDRC researchers and foreign counterparts can have free discussion about their respective interesting topics in a timely way. Not only that, before finishing the study tour, one visiting researcher has visited IDRC headquarter to do a progress report for IDRC project management. Fourthly, the conceptual framework of health indicator of "Healthy China 2020" has been developed and introduced to MoH, which might be used in another national evaluation project later on. Fifthly, through the intensive communication efforts of mentors, the editor of Journal of Health Planning and Evaluation expressed his interests in the program and decided to set up a China Forum in the journal to host learners' papers on evaluation of their ongoing projects. The five abstracts of the papers are suffering the final reviewing. The last but not the least, the administrative skills of the project officer has been improved significantly in the direction of IDRC management model.

Dissemination

In 2011, the trainees have taken opportunity of three international conferences to disseminate the project research findings. In October 2011,by taking a short term mentoring program in Canada, two researchers and four policy makers had sponsored attendance in the 33rd Annual Meeting of Society of Medical Decision Making in Chicago, USA. The Chinese delegation shared their views about health policy evaluation in China with concepts and theories learned from the IDRC training workshops. Their involvements impressed the counterparts all over the world. On the 2012 Annual Meeting of Heath Technology International (HTAi), Prof Kun Zhao has shared the experience of such collaborative project with the attendees from all over the world. The same year, there is an Asian Regional Evaluation Forum held in Thailand, Prof. Kun Zhao introduced the project to Asian counterparts, afterwards,

some attendees from other Asian countries expressed their willing to participate in further phase two of project.

Furthermore, CNHDRC and IDRC has been invited to join the two consecutive China-Canada Health Policy Dialogues since the outstanding achievements of our bilateral collaboration project. Within whatever the ministers, seniors policy makers and academicians, our project has been promoted and defined as a example of success in the field of health research between two nations and also been introduced to more and more insiders and outsiders. They all hope we can further the cooperation in phase two and disseminate the findings in a large scale in future.

Moreover, because of the broad impact caused by such bilateral collaboration project, some international agencies in the field of health research has expressed their willingness to cooperate in the capacity building, and a cost-effectiveness hand-on training workshop has been put into action in Aug 2012, which was conducted by mentors from University of Queensland and funded by Disease Control Priority Network (DCPN). This is a successful case for deriving of secondary capacity building project based on the outstanding influence of our bilateral collaboration project. Following the development of project going, our project will draw more attention in a larger scale.

List of outputs:

- The name list of five-day workshop participants, agenda, and group photo. Corresponding workshop presentation PPT is available upon request. – Appendix Ⅰ.
- The agendas of the joint meeting and The third Canada--China policy dialogue in Toronto—Appendix Ⅱ.
- The questions of interest to Canada and speech statement of CNHDRC delegate—Prof. Hongwei Yang during the third Canada--China policy dialogue in Toronto—Appendix Ⅲ.
- Report PPT slide for short term oversea mentoring program.—AppendixⅣ.

- CNHDRC Report PPT slide to IDRC during the attending of The third Canada--China policy dialogue in Sep 2011 -- AppendixⅤ.
- The conceptual framework of indicators of healthcare system in China—Appendix Ⅵ.
- Papers regards to trainee's evaluation project in reviewing –It is too much to attach and available upon request.

Recommendation

First of all, the trainees have taken more interests in health equity issues since the government has turned its attention to improving the people's livelihood and social welfare system including healthcare, education and social security, etc. Health development, being an important means to ensure and improve people's livelihood and welfare, has been attached great importance by the current government. According to that, the equity issues are raised and become an important dimension to measure the health delivering. So if possible, in phase two, we hope IDRC can fund CNHDRC to develop equity-focused project evaluation.

Secondly, by undertaking the collaboration project with IDRC, we have made significant impact on some Chinese policy makers and practitioners in the field of health policy and technology evaluation. We do think there is an urgent need to expand the capacity building activities to cover more policy makers and evaluators from local provinces. The capacity building by conducting an exact equity-orientated project evaluation for local policy makers and implementers becomes priority issue because they come from grassroots level and are responsible for policy implementation. More importantly, they know what the real problems are in the implementation process and need to understand the outcome and impact of policy in the real world.

Furthermore, all the other public sectors in China need policy evaluation. We are wondering if it is possible for IDRC to network all the Chinese organizations which are undertaking IDRC projects, to share experiences in the area of evaluation, assist

each other or work together to do a social or development evaluation in a broader view. This would contribute a lot to the development of the Chinese evaluation society.

Appendix

Appendix Ⅰ: The name list of five-day workshop participants, agenda, and group photo

Health Policy Evaluation Workshop(Ⅲ) Participants List

	Name	Sex	Institution	
1	Felix Li	Male	Health Counsellor of Canadian Embassy	Counsellor
2	ZHUANG Ning	Male	Division of Planning and Pricing, Department of Planning and Finance，MOH	Division Chief
3	WANG Weifu	Male	Division of Planning and Pricing, Department of Planning and Finance，MOH	
4	CHEN Ningshan	Female	Division I of Policy Research，Department of Health Policy and Regulation，MOH	Division Chief
5	SHI Guang	Male	Department of Health Policy and Regulation，MOH	

6	WU Jing	Female	Health Reform Office，MOH	Division Chief
7	TIAN Xiaoxiao	Female	Health Reform Office，MOH	
8	XUE Haining	Female	Health Reform Office，MOH	
9	ZHOU Xiaoyuan	Female	Health Reform Office，MOH	
10	WANG Jinqian	Female	Division of Technology ,Department of Medical Science、Technology and Education，MOH	Division Chief
11	LIU Liqun	Male	Division of Community Health Care，Department of Maternal and Child Health Care and Community Health，MOH	Division Chief
12	ZHOU Weiwei	Female	Division of Community Health Care，Department of Maternal and Child Health Care and Community Health，MOH	
13	ZHU Yan	Female	Division of Community Health Care，Department of Maternal and Child Health Care and Community Health，MOH	

14	FAN Jing	Female	General Office，Department of Medical Administration，MOH	Division Chief
15	JIAO Yahui	Female	Division of Medical Management，Department of Medical Administration，MOH	Division Chief
16	ZHANG Zhenzhong	Male	China National Health Development Research Center(CHDRC)	Director
17	YANG Hongwei	Male	CNHDRC	Deputy Director
18	SONG Wenge	Male	Division of Health Policy and Regulation，Health Bureau of Liaoning Province	Division Chief
19	WANG Hui	Female	Division of Planning and Finance，Health Bureau of Shaanxi Province	Deputy Division Chief
20	WANG Peiyuan	Male	Division of Health Policy and Regulation，Chongqing Municipal Health Bureau	Senior Staff Member
21	LI Chuanrong	Male	Division of Health Policy and Regulation，QingDao Public Health Bureau，Shandong Province	Deputy Division Chief
22	CUI Shuang	Male	Health Reform Office of Qingdao	Principal Staff

				Member
23	HOU Yunxin	Male	Hanbin District Health Bereau，Shaanxi Province	Director
24	FANG Rongbing	Male	Office of NCMS	
25	HE Xiaoyan	Male	Office of NCMS	Deputy Director
26	HU Rong	Female	ChongQing City QianJiang District Health Bereau	deputy director general
27	ZHENG Zeyun	Male	ChongQing City QianJiang District Health Bereau	deputy director general
28	MA Xiangdong	Male	ChongQing City QianJiang District Medical Insurance Bureau	deputy director general
29	LIU Ying	Female	Accounting Department，Shengjing Hospital of China Medical University	deputy division head
30	JU Hongxia	Female	Affiliated Hospital of Jining Medical College	President
31	HU Wenjie	Female	Affiliated Hospital of Jining Medical College	Vice-president
32	LIU Zhonghe	Male	Qianjiang Central Hospital of Chongqing City	Vice-president
33	YU Shicheng	Male	CDC(Information Center)	

34	HU Yuehua	Female	CDC(Information Center)	Research Assistant
35	XIE Xueqin	Female	Beijing Public Health Information Center	Deputy Director
36	ZHU Haidi	Female	China-Australia Health and HIV/AIDS Facility Office	
37	TENG Baijun	Male	Chinese Health Economics Magazine	Associate Managing Editor
38	ZHANG Hongli	Female	Chinese Health Economics Magazine	Deputy Director
39	JIN Chenggang	Male	Beijing Normal University	Professor
40	WANG Yadong	Male	Capital Medical University	Professor
41	HAN Youli	Female	Capital Medical University	Lecturer
42	HAO Yuantao	Male	School of Public Health，Sun Yat-Sen University	Vice Dean
43	CHEN Shaoxian	Male	Sun Yat-Sen University	Professor
44	LIU Guoxiang	Male	Harbin Medical University	Professor
45	ZHAO Xiaowen	Female	Harbin Medical University	Associate Professor
46	WANG Yanju	Female	China Medical University	Professor
47	CAO Xiaohong	Female	China Medical University	
48	MA Li	Female	Dalian Medical University	Associate Professor

49	ZHANG Ying	Female	Dalian Medical University	Associate Professor
50	ZHANG Jun	Male	Liaoning Health Vocational College	Department Head
51	WANG Chunpeng	Male	Liaoning Health Vocational College	
52	LIU Shiqin	Female	Johnson&Johnson Medical(China)Ltd.	Manager
53	ZHANG Lifang	Female	CNHDRC	Research Assistant
54	WANG Yunping	Female	CNHDRC	Research Assistant
55	ZHANG Yuhui	Male	CNHDRC	
56	Sue Horton	Female	University of Waterloo	Professor
57	DONG Weizhen	Female	University of Waterloo	Professor
58	Fred Carden	Male	IDRC	Professor
59	Sanjeev Sridharan	Male	Li Ka Shing Institute	Professor
60	ZHANG Wei	Female	Translator	
61	ZHANG Wei	Female	Translator	
62	ZHAO Kun	Female	CNHDRC	Professor
63	WANG Li	Female	CNHDRC	
64	QIN Jiangmei	Female	CNHDRC	Professor

65	XIAO Yue	Female	CNHDRC	Research Assistant
66	SUI Binyan	Female	CNHDRC	Research Assistant
67	GUO Wudong	Male	CNHDRC	Research Assistant
68	WANG Li	Female	CNHDRC	Intern
69	QI Xueran	Female	CNHDRC	Intern
70	LU Xiaojia	Female	CNHDRC	Intern
71	YANG Liu	Female	CNHDRC	Intern
72	WANG Yao	Male	CNHDRC	Intern
73	YU Fangfei	Male	Beijing Normal University	volunteer
74	WU Zhihuan	Female	Beijing Normal University	
75	KUANG Xiangyu	Male	Capital Medical University	
备注				

Agenda of health policy evaluation workshop (□)

卫生政策评价培训班（第三期）日程

August 24-28 Beijing

8 月 24 日-28 日 北京

Day/时间	Topic areas/ 主题	Time /时间	Chair/Mentor 主席/主讲人	Place/地点
Day 1 （24th August）Policymakers-orientation Sessions (simultaneously translation) **第一天（8 月 24 日） 以决策者为主（同传翻译）**				
Day 1 Morning 第 1 天 上午	Opening 开幕式	9:00--9:10	Hongwei Yang 杨洪伟副主任	Room 205, Conference center, Health Science Center of Peking University 北京大学医学部会议中心 205
	opening speech—five minutes each 开幕式致辞（各 5 分钟） Health Counsellor of Canadian Embassy—Flex Li 加拿大使馆卫生参赞 Felix Li IDRC Program Officer 加拿大 IDRC 项目官员 :Marie Gloriose Mentors 外籍讲师：Sue Horton、Weizhen Dong、Fred Carden、Sanjeev Sridharan	9:10--9:40		

	Introduction of new learners and workshop design 介绍新学员和活动设计	9:40--9:45	Kun Zhao 赵琨	
	Type of evaluation and application and requisitions 评价的类型，具体应用和相关问题	9:45--10:55	Fred Carden Sanjeev Sridharan	
	Evaluatability of evaluation: what kind of project can be evaluated 评价的可评价性：哪一类评价项目可以被评价？			
	Coffee break 茶歇	10 :55--11:10		
	Influence of decision informed evidence/evidence informed decision on evaluators 决策引导的实证和实证为基础的决策对评价工作者的影响	11:10--12:00		
	Outcome mapping: how to make boundary of outcomes 结果映射：如何界定结果域			
	Lunch 午餐	12:00--14:00	All/全体	Second floor, ShangShanYuan Restaurant

				尚善苑 2 楼
Day 1 Afternoon 第 1 天 下午	Economics Evaluation: why use economics evaluation in health care? 经济学评价：医疗服务评价项目中为何要用到经济学评价	14:00--14:40	Sue Horton	Room 205, conference center, Health Science Center of Peking University 会议中心 205
	Main perspectives in health care equity: Social determinants of health, population health, and social justice on health. 有关卫生公平性的主流观点：健康的社会决定因素，人群健康和卫生的社会公正	14:40--15:20	Weizhen Dong	
	Coffee break 茶歇	15:20--15:35	All/全体	
	Case discussion: Take clinical pathway as a case to discuss the challenge & question facing evaluators, evaluation needs of policy makers at this project, type of evaluation used properly. 案例讨论：以“临床路径”为例讨论评估者面临的问题与挑战，决策者在项目里的评价需要及评价模式的选择	15:35--17:20	Fred Carden	

	Dinner 晚餐	17:20--19:00	All/全体	Second floor, ShangShanYuan Restaurant 尚善苑 2 楼
Day 2--5 Researchers-orientation Sessions (consecutive translation) **第 2--5 天 以研究人员为主（交叉翻译）**				
Day 2 (Morning，25th August) Economics evaluation **第二天（8 月 25 日上午）经济学评估**				
Day 2 Morning 第 2 天 上午	Definition of economics evaluation 经济学评价的定义	9:00--10:30	Sue Horton	Room 205, conference center, Health Science Center of Peking University 会议中心 205
	Coffee break 茶歇	10:30--10:45		
	Type of economics evaluation and application conditions 经济学评价类型及应用条件	10:45--12:00		
	Lunch 午餐	12:00--14:00	All/全体	First floor, ShangShanYuan Restaurant 尚善苑 1 楼

Day 2 （Afternoon，25th August) Equity analysis in health care sector **第二天（8 月 25 日下午）卫生领域的公平性分析**				
Day2 Afternoon 第 2 天 下午	Definition of equity in health care sector 卫生领域公平性定义	14:00--15:30	Weizhen Dong	Room 205, conference center, Health Science Center of Peking University 会议中心 205
	Coffee break 茶歇	15:30--15:45		
	Practical methods of equity analysis 公平性分析的实用方法介绍	15:45--17:20		
	Dinner 晚餐	17:20--19:00	All/全体	First floor, ShangShanYuan Restaurant 尚善苑 1 楼
Day 3 (26th August) Developmental evaluation **第三天（8 月 26 日） 发展性评估**				
Day 3 第 3 天	Definition of development evaluation 发展性评估的定义	9:00--10:30	Fred Carden Sanjeev Sridharan	Room 205, conference center, Health Science Center of Peking University
	Distinguishing of formative, summative and developmental			

	evaluation 区别形成性、总结性和发展性评估			会议中心 205
	Coffee break 茶歇	10:30--10:45		
	System Thinking and Complexity Concepts for development evaluation 发展性评估中的系统认知和复杂性概念	10:45--12:00		
	Lunch 午餐	12:00--14:00	All/全体	Second floor, ShangShanYuan Restaurant 尚善苑 2 楼
	The Adaptive cycle and development evaluation 适应循环和发展性评估	14:00--15:30	Fred Carden Sanjeev Sridharan	Room 205, conference center, Health Science Center of Peking University 会议中心 205
	Coffee break 茶歇	15:30--15:45		
	Case study for the development evaluation 发展性评估的案例介绍	15:45--17:20		
	Steps of for the development evaluation			

	发展性评估的步骤			
	Dinner 晚餐	17:20--19:00	All/全体	Turkestan Restaurant 西域食府
Day 4 （ 27th August ） Outcome mapping 第四天（8 月 27 日）结果映射				
Day 4 第 4 天	Definition of outcome mapping 结果映射的定义	9:00--10:30	Fred Carden Sanjeev Sridharan	Room 103, Yifu Buildin, Health Science Center of Peking University 逸夫教学楼 103 会议室
	The theory of outcome mapping 结果映射的理论			
	Coffee break 茶歇	10:30--10:45		
	Approaches of outcome mapping 结果映射的方法	10:45--12:00		
	Lunch 午餐	12:00--14:00	All/全体	Second floor, ShangShanYuan

				Restaurant 尚善苑 2 楼
	Design of the outcome mapping 结果映射的设计	14:00--15:30	Fred Carden Sanjeev Sridharan	Room 103, Yifu Buildin, Health Science Center of Peking University 逸夫教学楼 103 会议室
	Coffee break 茶歇	15:30--15:45		
	Case study of mapping outcomes 结果映射的案例介绍	15:45--17:20		
	Dinner 晚餐	17:20--19:00	All/全体	Second floor, ShangShanYuan Restaurant 尚善苑 2 楼
Day 5 (28th August) 第五天（8 月 28 日）				
Day 5 Morning 第 5 天 上午	Decision informed evidence/Evidence informed decision 决策引导的实证研究/实证为基础的决策	9:00--12:00 10:30--10:45 茶歇	Fred Carden	Room 205, conference center, Health Science Center of Peking University
	Difference in evaluation 评价项目的差异			

				会议中心 205
	Lunch 午餐	12:00--14:00	All/全体	Second floor, ShangShanYuan Restaurant 尚善苑 2 楼
Day 5 Afternoon 第 5 天 下午	Data analysis and interpreting the results 数据分析和结果阐释		Sanjeev Sridharan	Room 205, conference center, Health Science Center of Peking University 会议中心 205
	Quantitative data analysis 定量数据分析	14:00--15:30		
	Coffee break 茶歇	15:30--15:45		
	2、Qualitative data analysis 定性数据分析	15:45--17:00		
	Wrap up 会议总结	17:00--17:30	Zhengzhong Zhang 张振忠主任	

	Dinner 晚餐	17:30--19:00	All/全体	Second floor, ShangShanYuan Restaurant 尚善苑 2 楼


卫生政策评价培训班(第三期)
Health Policy Evaluation Workshop III
WEI Xiao
08/24/2011 10:37

Appendix Ⅱ: The agendas of the joint meeting and The third Canada--China policy dialogue in Toronto

Canada-China Joint Committee on Health

中加联委会

September 26, 2011

Monday, September 26, 2011

星期一，2011 年 9 月 26 日

Venue 地点: Library Room, Fairmont Royal York Hotel

100 Front Street West, Toronto, Ontario, M5J1E3

09:00 – 09:15	**Session 1:** Plenary opening 第一节：开幕式 • Welcome remarks from Co-Chairs (5 minutes each)	Chair:主席 Bersabel Ephrem Speakers:发言人

	主席欢迎致辞（中加主席各发言 5 分钟） • Brief Introductions of delegation participants (5 minutes) 到会人员简介（5 分钟） • Adoption of Agenda 宣读日程	Bersabel Ephrem REN Minghui
09:15 – 10:30	**Session 2:** Technical Presentation & Policy Discussion on Rural Health 第二节：农村卫生技术演讲及政策讨论 • Presentation by China:中方演讲 o Introduction to Rural Health Work (20 minutes) 农村卫生工作介绍（20 分钟） • Presentations by Canada:加方发言 o Health System Financing in Canada (10 minutes) 加拿大卫生体系筹资（10 分钟）	Chair:主席 Bersabel Ephrem Speakers:发言人 YANG Qing Serge Lafond Jim Harrold

	○ Rural Health Finance (10 minutes) 农村卫生筹资（10 分钟） • Q&A and Discussion (30 minutes) 问答及讨论（30 分钟）	
10:30 – 10:45	Break 茶歇	
10:45 – 11:15	**Session 3:** Progress Report on Health Cooperation 2009-11 第三节：2009-11 卫生合作进展报告 • Presentation of Report (15 minutes) 报告阐述（15 分钟） • Q&A and Discussion of Next Steps (15 minutes) 关于下步合作的问答及讨论（15 分钟）	Chair:主席 REN Minghui Speaker:发言人 Martin Méthot
11:15 – 11:50	**Session 4:** Future Cooperation	Chair:主席

	第四节：未来合作 • Plan of Action and next CCPD 下步行动及下届中加卫生部长对话 • Summary of next steps 下步工作总结	REN Minghui
11:50 - 12:00	**Session 5:** Closing Remarks 第五节：闭幕式 • Concluding remarks from Co-Chairs (5 minutes each) 主席总结致辞（中加主席各发言 5 分钟）	Bersabel Ephrem REN Minghui

Canada-China Policy Dialogue

中加卫生部长对话

Agenda

Tuesday, September 27, 2011

星期二，2011 年 9 月 27 日

08:45	Minister Chen arrives for Plenary of CCPD Meeting 陈竺部长抵达 Location:地址　Tudor Room 7 & 8，　2nd Floor，Fairmont Royal York
09:00 – 09:10	Plenary opening 开幕式 Canadian head of delegation will deliver welcoming remarks on behalf of the Minister of Health – 5 minutes 加拿大代表团领导代表加卫生部致欢迎词（5 分钟） Minister Chen gives welcoming remarks – 5 minutes 陈竺部长致欢迎词（5 分钟）
09:10 – 09:50	Plenary – Facilitator led discussion 全体大会—主持人以讨论形式组织会议 Theme I – Rural Health Human Resources 主题一：农村卫生人力资源 Canadian expert: 加方专家 Bob Shearer, A/Director General, Health Care Programs and Policy /Directorate, Strategic Policy Branch Chinese expert:中方专家: Dr. Zhang Guangpeng, Director of Research Center, Service Center for Health Human Resource Exchange 35-minute facilitated discussion including identifying common challenges, sharing innovative solutions, and identifying potential areas for cooperation 35 分钟的讨论包括识别共同面临的挑战，分享创新方案以及确定潜在合作领域。

09:50 – 10:30	Plenary – Facilitator led discussion 全体大会—主持人以讨论形式组织会议 Theme II – Rural Health Financing 主题二：农村卫生筹资 Chinese expert 中方专家: Dr. Yang Hongwei, Deputy Director General, China National Health Development Research Center Canadian expert 加方专家: Ellen Nemetz, Manager of Population Health, Health System Strategy and Policy Division, Ministry of Health and Long Term Care, Ontario 35-minute facilitated discussion including identifying common challenges, sharing innovative solutions, and identifying potential areas for cooperation 35 分钟的讨论包括识别共同面临的挑战，分享创新方案以及确定潜在合作领域。
10:30 – 10:45	Break 茶歇
10:45 – 11:25	Plenary – Facilitator led discussion 全体大会—主持人以讨论形式组织会议 Theme III – Electronic Health 主题三：健康信息化 Canadian expert 加方专家: Don Newsham, CEO, Canada Health Informatics Association Chinese expert 中方专家: Mr. Wang Caiyou, Deputy Director General, Center for Health Statistics 35-minute facilitated discussion including identifying common challenges, sharing innovative solutions, and identifying potential areas for cooperation 35 分钟的讨论包括识别共同面临的挑战，分享创新方案以及确定潜在合作领域。
11:25 – 11:50	Facilitator gives Summary of discussions & next steps 主持人就讨论及下一步工作进行总结
11:50 – 12:00	Concluding Remarks by Canadian head of delegation and Minister Chen 加方代表团领导及陈竺部长致闭幕词 Minister Chen gives concluding remarks – 5 minutes 陈竺部长致闭幕词（5 分钟） Canadian head of delegation gives concluding remarks – 5 minutes

	加方代表团领导致闭幕词—（5 分钟）
12:00 – 12:05	Minister Chen and Canadian head of delegation will be escorted to the Library Room for the VIP CCPD Lunch 陈竺部长及加方代表团领导被引至 VIP 午餐
12:05 – 13:15	Lunch hosted by Health Canada 加拿大卫生部午餐招待
13:15 – 13:30	Minister Chen and officials are driven to Hospital for Sick Children, and are greeted at arrival by Cathy Seguin, Vice President, International Affairs. 陈竺部长及官员到达儿童医院，由医院国际事务副主席 Cathy Seguin 接待并陪同参观。 Location 地址: Hospital for Sick Children - 525 University Avenue , Room: Multi-media room

13:30 – 15:45	Visit co-hosted by Hospital for Sick Children, and Ontario Telemedicine Network (OTN) 由儿童医院及安大略电子医疗网络共同接待 Welcome by: Cathy Seguin (Hospital for Sick Children) and Dr. Ed Br own (OTN) Cathy Seguin 代表儿童医院、Dr. Ed Brown 代表安大略电子医疗网络致欢迎词 Remarks by Deputy Minister Yeates and by Minister Chen 由中加部长分别致辞 - Canada Health Infoway 加拿大卫生电子化道路 - Ontario Telemedecine Network 安大略电子医疗网络 - Video link-up #1: Hospital for Sick Children's Telepsychiatry Program 播放录像（一） - Video link-up #2: CSTAR (Robotics and Surgical Techniques) 播放录像（二） - Video link-up #3: Remote Ontario First Nations Community: 播放录像（三） Keewaytinook Okimakanak First Nations (Traditional healers) - Video link-up #4: Iqaluit Qikiqtani Hospital and Royal College of 播放录像（四） Physicians and Surgeons (TBC) Closing remarks by Minister Chen, and Canadian head of delegation 由陈竺部长及加方代表团领导做结束语

15:45 – 16:00	Minister Chen and officials are driven to Royal York Hotel 陈竺部长及官员驶回酒店
16:00 – 16:30	Personal time 自由活动时间
16:30 -17:00	Bilateral meeting between Minister Chen and Minister Aglukkaq 中加卫生部长双边会谈 Location:地址 Algonquin Room, 2nd Floor, Fairmont Royal York
17:00 – 17:15	Minister Chen and delegates will be led to the Library Room for the Signing of the Plan of Action, and CCPD Reception 陈竺部长被引致 Library Room 签署《行动纲领》文件，并准备参加 CCPD 招待酒会
17:15 – 17:30	Signing ceremony of the Plan of Action, and Photo-Op 签字仪式及拍照, Location 地点: Library Room, 2nd Floor, Fairmont Royal York
17:30 – 18:00 18:00	Minister Aglukkaq open the CCPD Reception, 加方部长 Aglukkaq 宣布酒会开始 Location 地址: Library Room, 2nd Floor, Fairmont Royal York Minister Aglukkaq to provide welcome remarks, to be followed by Minister Chen. 中加卫生部长先后致辞
18:15	Minister Aglukkaq and Minister Chen are driven to the CCPD VIP Dinner 中加卫生部长出发至 VIP 晚宴地点
18:30 – 20:30	CCPD VIP Dinner CCPD CIP 晚宴，Location 地址: Biff's Bistro，4 Front Street， Toronto

Appendix Ⅲ: The questions of interest to Canada and speech statement of CNHDRC delegate—Prof. Hongwei Yang during the third Canada--China policy dialogue in Toronto

Questions of Interest to Canada

For Canada-China Policy Dialogue 2011

eHealth

- How is China using eHealth to support its current heath system reform?
- What is China's strategy for developing health information systems, including electronic health records (EHRs) and electronic medical records (EMRs)? How does China measure success in this area?
- How is China using telemedicine to support the delivery of health care services in rural and remote communities?
- How is China addressing the challenge of combining jurisdictional innovation with broader inter-operability?
- What are China's key lessons learned and best practices in eHealth?
- What key challenges has China found in pursuit of its eHealth strategies? How is China addressing, or how might it address, these challenges?
- We are aware of the medical education website www.haoyisheng.com, and would be interested in more information on this initiative, and others like it.

Rural/Remote Health Human Resources (HHR)

- What are the main strategies China is using to address the overconcentration of health resources in urban centres?
- What challenges has China discovered in implementing its strategies?
- How does China measure success in this area?
- How is China addressing specifically the challenges of 1) recruitment, 2) retention, 3) training and 4) integration of rural/remote health professionals?
- What best practices has China identified in the area of rural HHR?
- What is China's experience with team-based care or interprofessional collaboration?

Rural/Remote Health Finance

- What are the key challenges China faces in financing health infrastructure and services in rural and remote settings?
- What measures is China already taking, and considering in the future, to address inequities in health finance between different population groups? Different regions and/or jurisdictions?
- What promising models in health financing is China currently exploring, at local, provincial and national levels?
- What best practices has China found in rural health financing?
- What are China's key lessons learned from dealing with issues of health financing?
- What models of collaborative health financing is China using?

The Financing in China Rural Health

Ⅰ、The general information and constitution of financing in China rural health

From the financing point of health, national rural health expenditure increases

from 177.181 billion RMB to 400.631 billion RMB from 1998 to 2009. The per capital rural health expenditure increases from 194.63 RMB to 561.99 RMB, which is still running at a low level and only accounts for 43% of national average , even less than 30% of urban one. （Figure 1）

The Financing in China rural health is created through following ways: The fiscal input for rural health, which is based on different taxations.

Personal health expenditure, which is paid for health care by residents in cash.

The health expenditure of social security, which is part of the legitimate social health insurance fund (New Cooperative Medical Scheme-NCMs) paid by rural residents and rural collective economy bodies, also the Medicaid afforded by rural enterprises.

Commercial health insurance expenditure, which is paid by the different kind of commercial insurance companies to cover the insured rural residents purchased of whose own motion.

From 1998 to 2009, the fiscal input increases from 34.964 billion RMB to 115.59 billion RMB, which accounts for nearly 30% of total financing in rural health; the total personal health expenditure increases from 118.024 billion RMB to 204.982 billion RMB, whose weight has declined from 69.05% in 2004 to 51.16% in 2009; The social financing in rural health increases from 24.193 billion RMB to 80.059 billion RMB, whose weight has reached to 19.99% rather than 13.65% .

Ⅱ、The major problems of financing in China rural health

1. the large expenditure gap between urban area and rural area.

The per capital health expenditure is decreasing in contrast to national average expenditure, which is 0.59 in 2000 to 0.43 in 2009. The value between rural and urban is insignificant. The absolute value between rural and urban is enlarging.

2. The budgeting way to governmental health care subsidy to provider need to improve, and the volume is urged to improve.

The total volume increase of fiscal input is caused by rapid governmental subsidy of NCMs after 2003. The direct subsidy for rural health care institutes are not more significant than others.

3. The compensation rate of NCMs is still low.

In 2010, the coverage population of NCMs reached to 836 million people, and

the participation rate was 95.99%, financing of per capital was around 156.57 RMB. The NCMs compensation amount of impatient reached to 1451.68 RMB which is doubled rather than 2004, but only accounts for 39% of county-level inpatient expenditure.

4. OOP of rural resident is not diminished.

Within the current total financing in rural health, the proportion of per capital healthcare expenditure in per capital consumption expenditure is increasing, which increased from 5.25% in 2000 to 7.44% in 2010. Such change presents that the OOP of rural residents is increasing.

The question list for Canadian colleagues:

1. What is the major source of Canadian financing in rural health and corresponding outflows?

2. How Canada achieve the better equity of financing（NO.19 in WHO ranking, 2000）？

3.What is the major problem faced by Canada in the aspect of financing in rural health？How to deal with that？

Appendix IV: Report PPT slide for short term oversea mentoring program

Contents

- What I did
  - ✓ Study of the theory
  - ✓ Social Practices
- What I learnt
- Next Steps
- Acknowledgement

What I Did

Study of the theory:

1: University of McMaster: (Fall semester)
Course: Health Economics
Instructor: Prof. Jeremiah Hurley

Summary: It is a survey course on the economics of health and health care, with an emphasis on the Canadian health care system. Particular attention has been given to public policy issues for which economic analysis has potential to contribute constructively to their resolution.

What I Did

2: University of Waterloo: (Fall semester)
Course: Health Economics (On-line based)
Instructor: Prof. Susan E. Horton

Summary: Health Economics is used to examine how scarce resources are allocated between competing needs.

3: University of Toronto: (Fall semester)
Course: Economics evaluation methods for health service research (Course Materials based)
Instructor: Prof. Peter C. Coyte
Summary: This course is designed to introduce an array of economic evaluation method used to assess health care programs, services, technologies, and other interventions.

What I Did

4: Li Ka Shing Knowledge Institute, St. Michael's Hospital
Topic: Proposal drafting for Phase two of IDRC project
Participants: Policy makers from MoH, China, Researchers from CNHDRC, Fred Carden, Sanjeev's team

Summary: As the continuation of capacity building achievements in phase one, phase two will focus more on equity-oriented health policy practical evaluation projects in the context of China health reform and national "12.5 " health development plan. –"Learning by doing"

Three dimensions: Equity evaluation, Economic evaluation and policy evaluation.

What I Did

Social Practices:

1: Third Canada-China Policy Dialogue

http://www.cnhdrc.cn/

卫生部卫生发展研究中心
China National Health Development Research Center

What I Did

Social Practices:

2: Toronto Health Economics and Technology Assessment Collaborative (THETA) visit

http://www.cnhdrc.cn/

卫生部卫生发展研究中心
China National Health Development Research Center

What I Did

Social Practices:

3: 33rd Annual Meeting, Society for Medical Decision Making (SMDM)

http://www.cnhdrc.cn/

卫生部卫生发展研究中心
China National Health Development Research Center

What I Did

Social Practices:

4: Inter RAI RBC Global Summit 2011

http://www.cnhdrc.cn/

卫生部卫生发展研究中心
China National Health Development Research Center

What I Did

Social Practices:

5: Shouldice hospital

What I Did

6: Scarborough regional hospital (Chronic Kidney Disease –CKD Dialysis Management Program)

7: GP Alliance

What I Did

8: Three workshops organized by Evaluation Centre for Complex Health Interventions

http://www.cnhdrc.cn/

卫生部卫生发展研究中心
China National Health Development Research Center

What I Did

http://www.cnhdrc.cn/

卫生部卫生发展研究中心
China National Health Development Research Center

What I Did

What I learnt

1: General Economics and Health Economics

Economics is the study of choice, where choice concerns alternative allocations of scarce resource. Health economics is the study of resource allocation decisions within the health marketplace and between that marketplace and other economic areas. Based on the coincident objectives, general economic technologies can serve the study of health economics effectively, However, we also should notice that health market is a special one to provide a particular public good—human health.

E.g.: Program for Assessment of Technology in Health (PATH) and Economic department of McMaster University

What I learnt

2: Efficiency V.S. Equity

Canada health system and health research impress me strongly that health achievement is not only the efficiency improvement, but also the Equity. in China, it is a challenge to balance the needs of efficiency and equity in the context of fast growing.

"A big cake is not enough, but how to cut it."

What I learnt

3: Policy Evaluation and Equity Evaluation

Policy evaluation is an integrated evaluation system which can be undertaken by both internal and external evaluators, and developed at different time points with a variety of formats.

Equity Evaluation: It has been carried out well in small scale and local interventions within community health in Canada, such as GP service.

For China, the basis is to disseminate the evaluation concept broadly, strengthen the capacity building and explore an appropriate mechanism for knowledge translation.

What I learnt

4: Information System in health agency is crucial.

Information system is a key and fundamental tool to do the evaluation analysis, whatever the program evaluation, policy evaluation or equity evaluation.

Example: 1: GP Alliance (information share)

2: Scarborough regional hospital (Chronic Kidney Disease –CKD Dialysis Management Program)

Next Step

1: Take training course regarding the Inter RAI evaluation tool.

2. Promote the papers drafted by Chinese evaluators to be published.

3: Strengthen the evaluation capacity building, both theory and practical experience in the field of policy evaluation, equity evaluation, and economic evaluation, etc.

4: Disseminate the evaluation concepts in a larger scale, make effort to format evaluation culture smoothly in Chinese health sector.

Acknowledgement

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Fred Carden

Evaluation Centre for Complex Health Interventions, LiKaShing knowledge Institute, St. Michael's hospital

Sanjeev Sridharans and his friendly team

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Appendix V: CNHDRC Report PPT slide to IDRC during the attending of The third Canada--China policy dialogue in Sep 2011

Peoples Republic of China

- Provinces – 23
- Municipalities – 4
- Autonomous Regions – 5
- Special Administrative Areas – 2
- Cities at prefecture level – 333
- Counties – 2859

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Population and Population Structure in 2009

Total Population and its Structure

Indicators	Amount (mil)	%
Total population	1334.74	100.0
Urban population	621.86	46.6
Rural population	712.88	53.4
Male	686.52	51.4
Female	648.22	48.6
60+	167.14	12.5
65+	113.09	8.5

Source: National Bureau of Statistics, Bulletin of economic and social development in 2009

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Health Capacity Indicators in 2009

Health facilities	27.8 (10,000)
Hospitals and clinic beds	374.8 (10,000)
Hospitals above-county level beds	13844
County hospitals beds	219.1(10,000) 5868
Community health service center beds	69.1(10,000) 24260
Township hospitals beds	9.80(10,000) 39080
Hospitals and clinic beds per 1000 population	84.69(10,000) 2.84

Source: MoH: Yearly Book of China Health Statistics in 2009

Major Challenges Faced by China Health Sector

Urbanization

Aging population

Industrialization

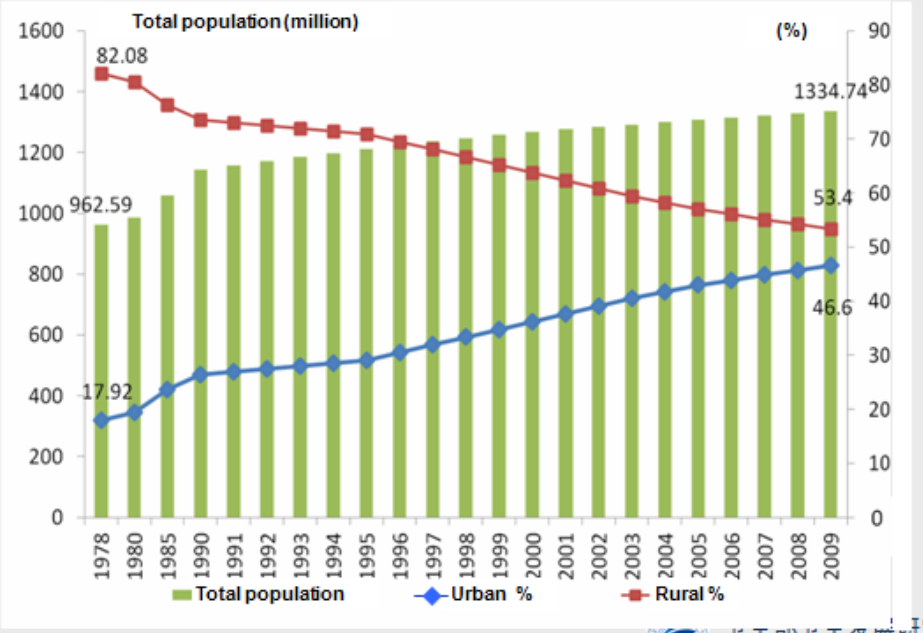
Globalization

Communicable diseases and chronic diseases

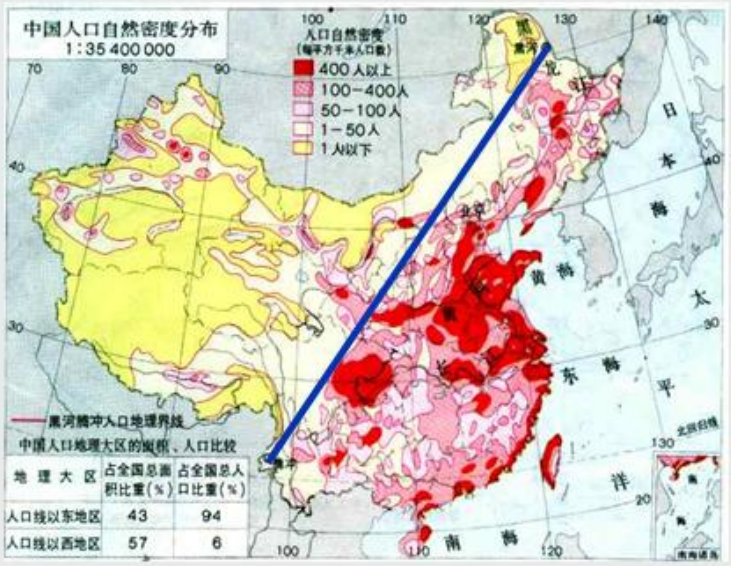
Unsafe living environment

Healthcare expenditure

Change of Urban/Rural Population Structure



Population Density and Movement



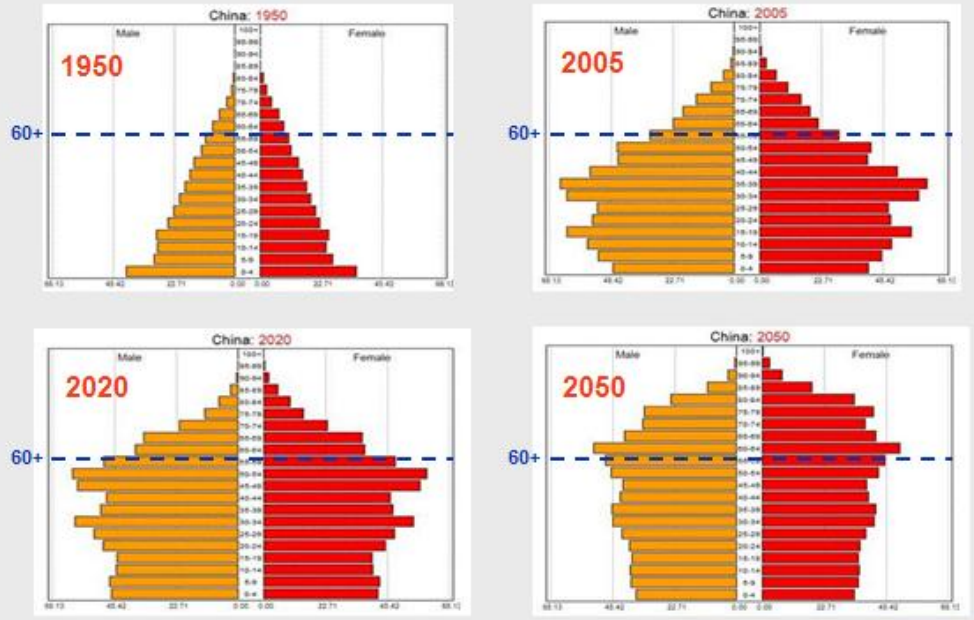
Population density (people/1000 m²)

- More than 400
- 100-400
- 50-100
- 1-50
- Less than 1

Population geography line

	Area (%)	Population (%)
East of the line	43	94
West of the line	57	6

Change of Population Age Structure (1950 – 2050)



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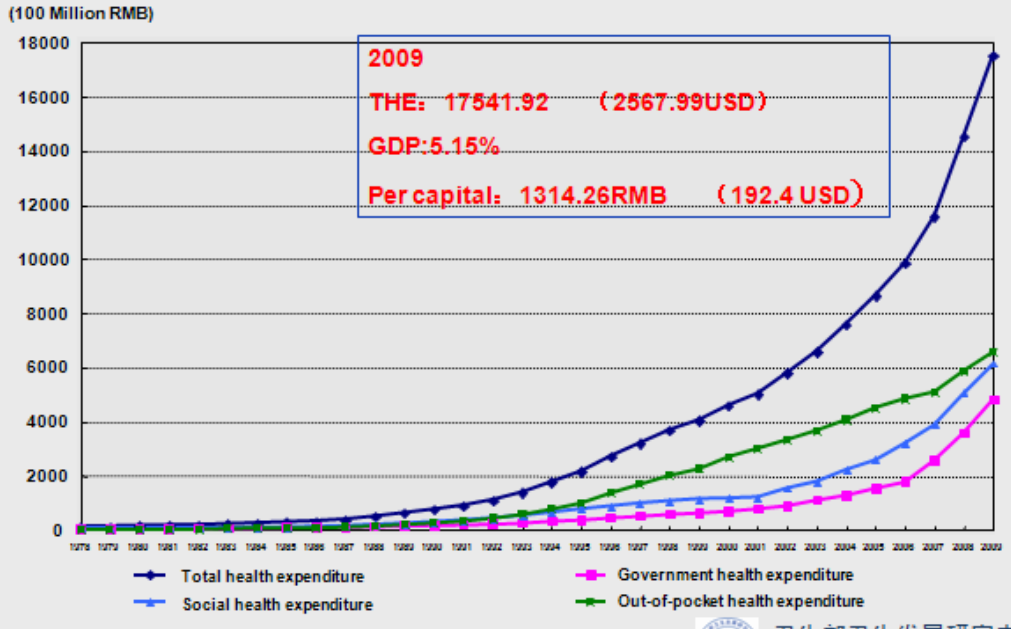
China THE by Source



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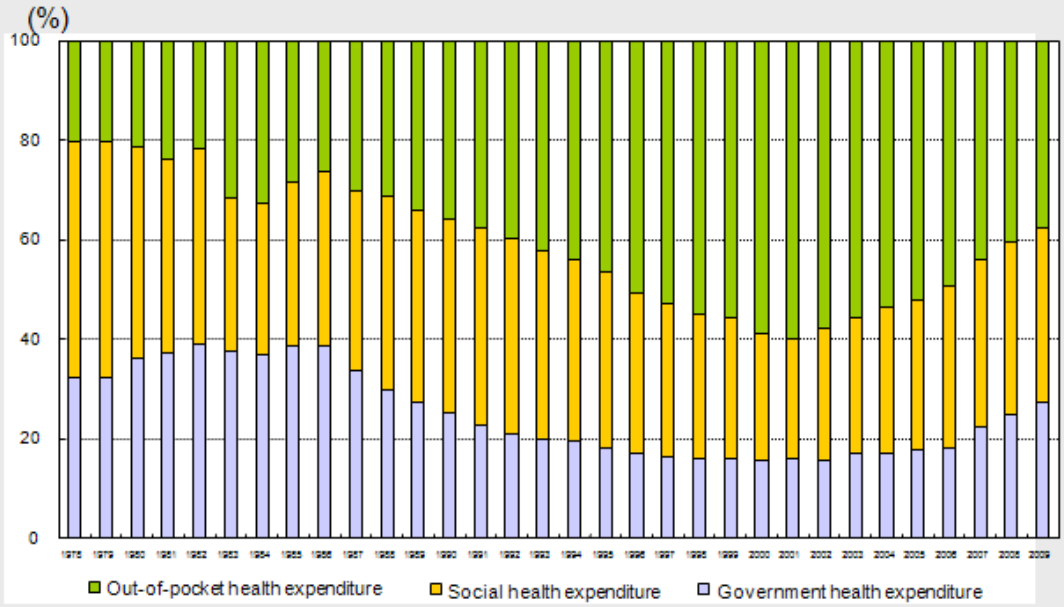
Source: National Bureau of Statistics, Yearbook of China Statistics 2010

Composition of THE by Source



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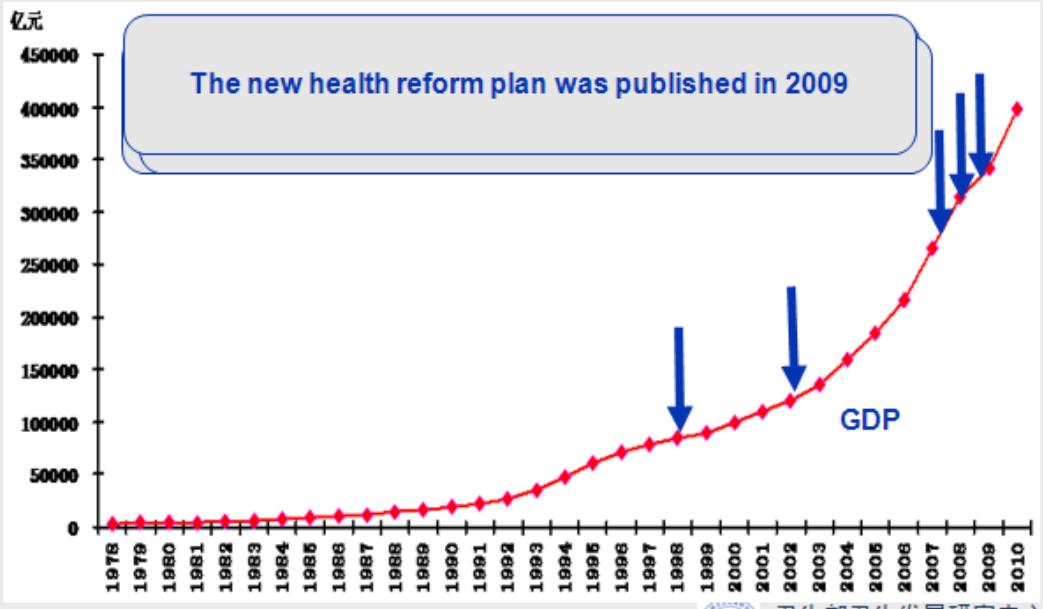
Source: National Bureau of Statistics, Yearbook of China statistics 2010

Major National Health Protection Schemes



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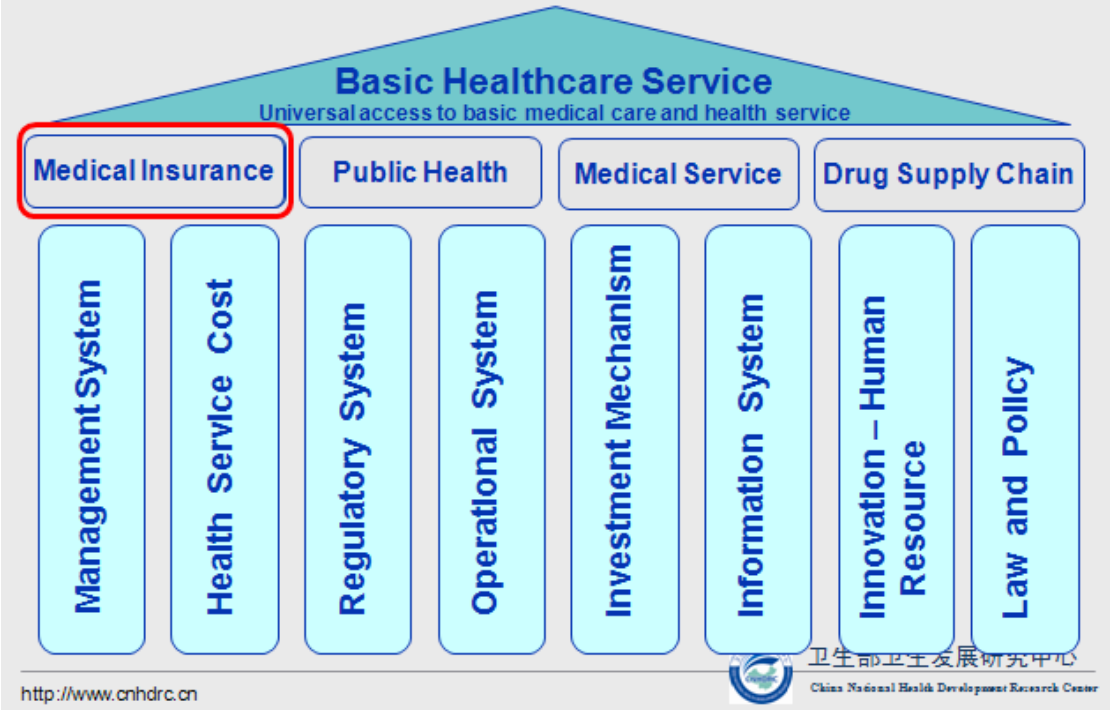
Healthcare Reform Framework



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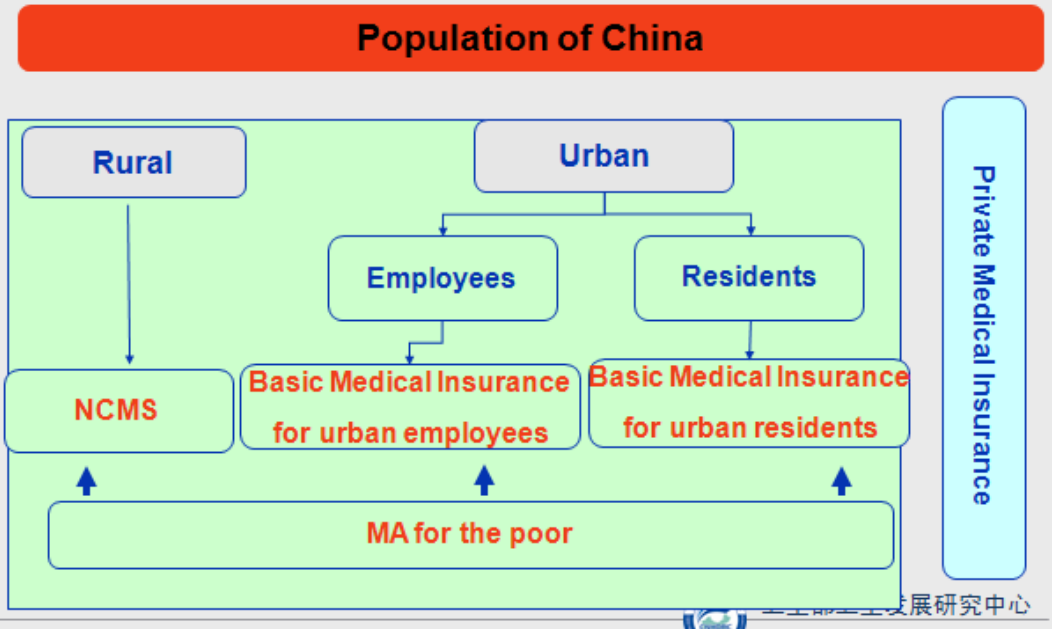
Medical Insurance (3 + 1 Insurance Scheme, April, 2009)



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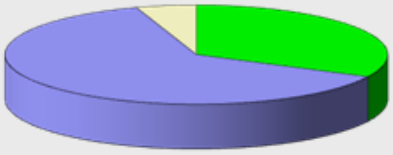
Overall insurance coverage

Total population 1.34 billion

Insurance cover for population 2010



Insurance cover for population

UEBMI and URBMI = 32.36%（432,060,000people）

NCMS = 62.56%（835,000,000people）

Total covered = 94.92%

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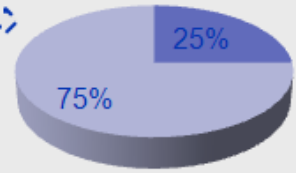
China National Health Development Research Center

Basic Medical Insurance for urban employees?

Salary contribution to insurance pool

Insurance pool

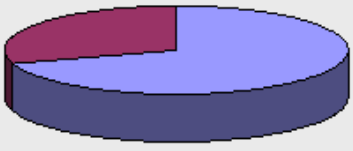


Funding

2%Employee contribution

6% Employer contribution

Payment to hospital for treatment



Payment 2010

Approximate 20-30% Patient

Approximate 70-80% Insurance Pool

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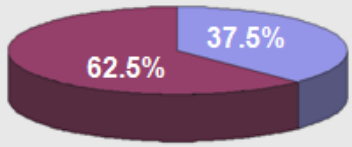
Basic Medical Insurance (UEBMI)

Insurance Pool Funding



Payment to hospital for treatment

Funding 2010

RMB 120 (37.5%) from government

RMB 200 (62.5%) personal contribution

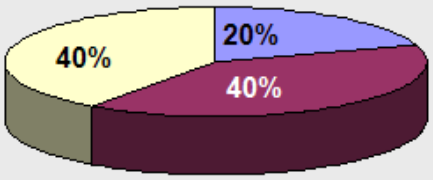
Payment 2010

Approximate 40% Patient

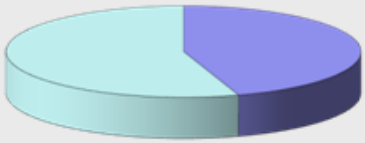
Approximate 60% Insurance Pool

NCMS insurance funding

Insurance Pool Funding



Payment to hospital for treatment



Funding

2010 RMB 150 ≈ 23USD

2011 RMB 200 ≈ 30USD

40% Central Government

40% Local Government

20% Personal Contribution

Payment 2010

Approximate 45% Patient

Approximate 55% Insurance Pool

Payment 2015

Approximate 30% Patient

Approximate 70% Insurance Pool

MA funding and expenditure

2005-2009 MA funding and expenditure（Million）

Year	Funding	Expenditure
2005	1090	780
2006	2300	1310
2007	4100	2810
2008	5070	3830
2009	8040	6460

Source： 2005-2009 Civil affairs statistics report of Ministry of Civil Affairs

42,237,000 poor people received MA

Effective integration of NCMS and MA should include the following 4 levels of integration of framework（take inpatient reimbursement for example）

Level 1:
Subsidize the rural poor to enroll in the NCMS

↓

Level 2:
Cancel or decline the deductible line of NCMS by MA

↓

Level 3:
Secondary reimbursement by MA after NCMS

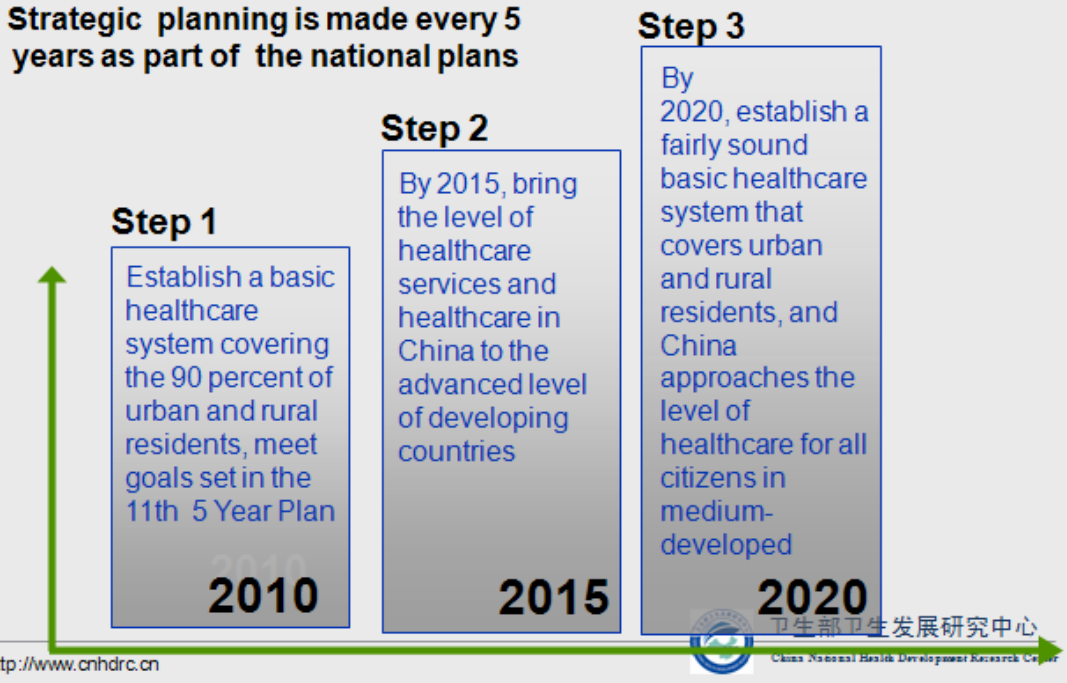
↓

Level 4:
MA provides temporary assistance to those who could not survive due to high OOP expenditure beyond NCMS reimbursement ceiling

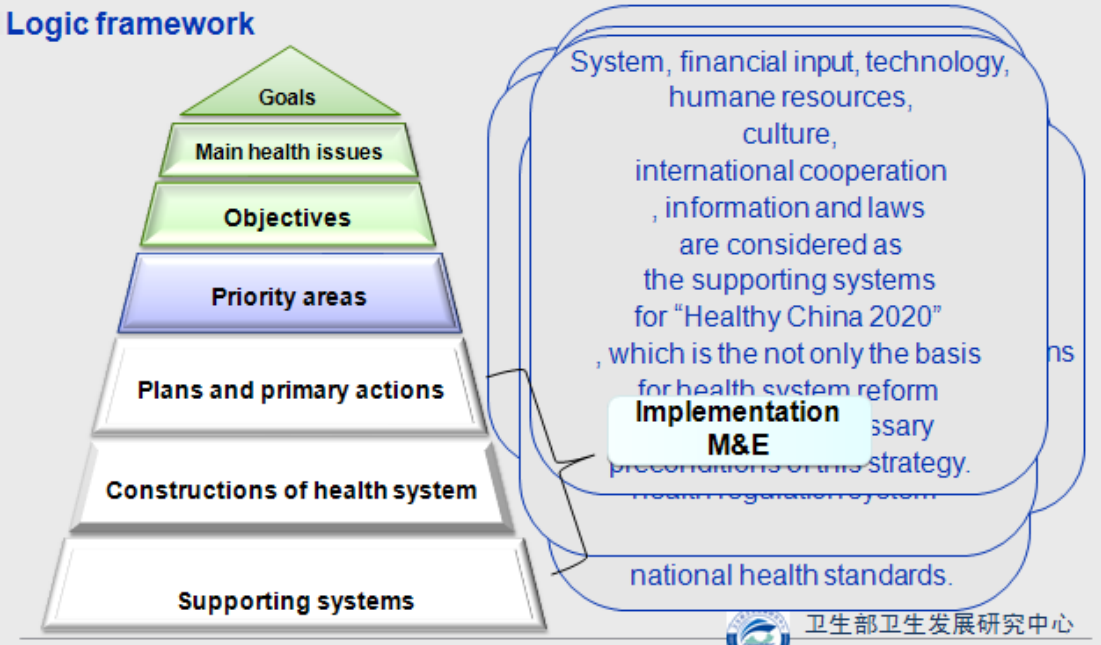
"Healthy China 2020" Strategy Overview

The "Healthy China 2020" Strategy is designed as a national middle and long term health development reform plan to 2020. It is an important strategy to improve the health level of the whole nation and realize the goal that everyone will have access to basic medical health services.

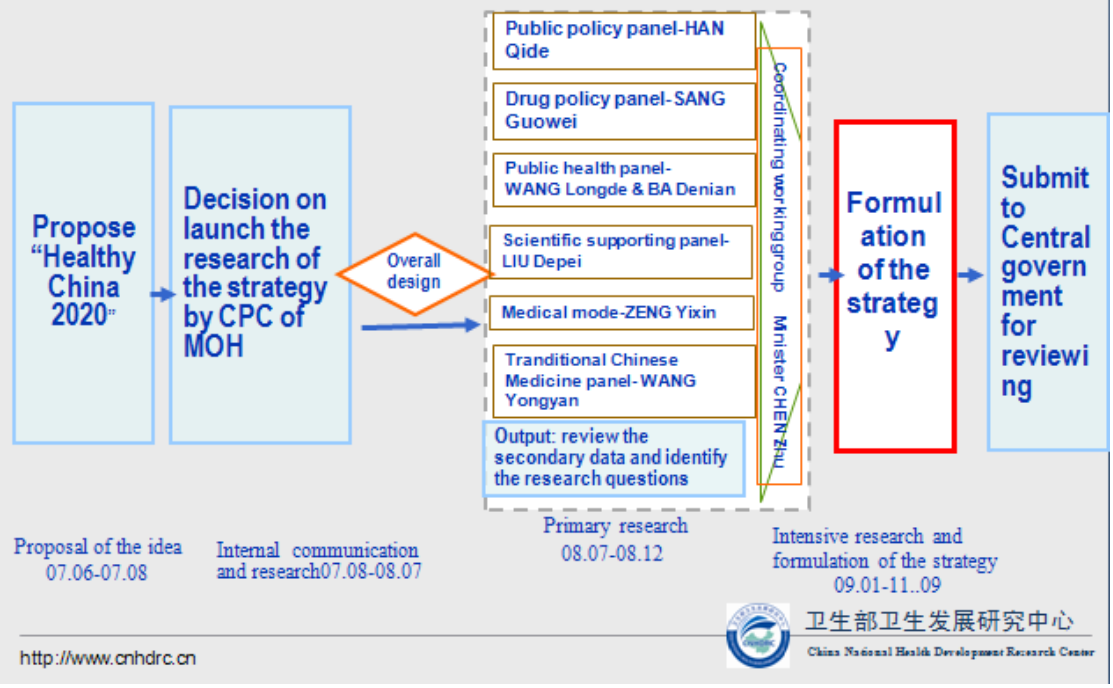
Strategy Planning and Implementation



Healthy China 2020 Strategy Overview



Research strategy and phases



Summary

* Place your footnotes / notes here

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Appendix Ⅵ: The conceptual framework of indicators of healthcare system in China

A conceptual framework of the indicator system for "Healthy China 2020"

China National Health Development Research Center (CNHDRC)

Beijing, China

February 25, 2011

Table of contents

1. Background

In recent years, many authors have noted that development actors and governments in developing countries have turned their attention to health systems strengthening (HSS) (Alva, et al., 2009). Since early 2000s, with increasing attention to the development of health system the Chinese government has designed and launched various reform and development interventions. In April 2009 it announced the launch of a comprehensive health systems reform and set up a three-year implementation plan (2009 - 2011), to ensure universal coverage of basic healthcare services by the year 2020. After a year and a half's implementation, the government is keen to know the preliminary results of the reform programs and to make timely adjustment to these interventions. As a result, evaluation programs on various scales have been set up to examine performance of reform interventions, such as essential drug policy and equalization of public health services.

Currently, various evaluation indicator systems, commissioned by different actors in health care reform, have been developed by various institutions. For instance, as commissioned by the Ministry of Health (MoH), the Center for Health Statistics and Information (CHSI) of MoH is charged with the monitoring and evaluation (M & E) with a set of indicators which focuses on M & E reforms for 2009 - 2011. The National Development and Reform Commission (NDRC) also entrusted the Peking University to develop an indicator system for health reform. There are indicators for evaluating a specific healthcare reform program or aspect of healthcare system, such as indicators for equalization of public health systems, and indicators for community health services. Meanwhile, different provinces are organizing their own evaluation of local health reform programs. In Henan Province, international and domestic experts have been invited to design an indicator system for the overall performance of public health programs under the new round of health reform. When examining the various evaluation programs, it is not difficult to see that these programs are lacking an overarching framework, and that there are overlapping, gaps and even contradictions

between 1various programs. As argued by Murray and Frenk (2000), a consistent and systematic framework is a must for assessing the performance of health systems.

Having seen the problem, MoH requested the World Health Organization (WHO) to help with the design and development of a comprehensive framework of monitoring and evaluation of the health reforms including a short, mid- and long-term perspectives (WHO, 2009). However, the monitoring and evaluation framework proposed by WHO has hardly any difference from what has been used by WHO in evaluating and comparing health systems performance since 2000 (WHO, 2000; 2007). What WHO did was to map the five priority areas of the new Chinese health reforms onto the 2000 WHO framework for assessing health systems performance, and put majority of efforts in examining the data sources and availability (WHO, 2009). Some Chinese scholars have already questioned the reliability of the 2000 WHO framework, and thought it did a poor job in equity assessment (Zhao, 2001; Jiang & Hu, 2002; Jiang & Hu, 2002).

Currently the Chinese government is designing its 12th Five Year Plan in various sectors. Since the 11th Five Year Plan (2006-2010), the government has turned its attention to improving the people's livelihood and social welfare system including healthcare, education and social security, etc. Health development, being an important means to ensure and improve people's livelihood and welfare, has been attached great importance by the current government. This will bring great opportunities as well as challenges to the healthcare development during the 12th Five Year period. Therefore, how to design the 12th Five Year Plan in health sector (the plan) and develop rational evaluation system has defined as a key topic by health policy makers in the country.

Against this background, this project attempts to set up a conceptual framework for assessing the short- and midterm reform and development of the health system, to develop an indicator system for evaluating both health interventions and policies. The rationale behind the theoretical framework is that China healthcare sector encompasses a complex, dynamic and evolving system undergoing rapid changes in a transitional context featured with multiple actors and networks, financial decentralization, unbalanced regional development, urbanized resource and labor

concentration, and people's growing expectation.

2. Conceptualizing the indicator framework

In the past evaluation has mostly depended on linear logic models to conceptualize and examine a project's logic model or theory of change, while recent years have seen an emerging trend that more emphasis on use of systems thinking and complexity science as frameworks for evaluation (Patton, 2007, 2010; Williams and Iraj Iman, 2006). The new trend shows some distinguished patterns. Firstly, perspectives and boundaries matter in systems thinking. By looking at the system as a whole differently and exploring the interconnections or dividing lines (boundaries) the evaluator can have a more realistic view of the world his or her evaluation will take place. Secondly, real-world policy or program is viewed as complex adaptive systems, with many systems entangling together and influencing each other. Thirdly, developmental evaluation method is more helpful in the context of social innovation where there is not a fixed model being improved (as in formative evaluation) or tested (as in summative evaluation).

The current health reform and development in China mimics a big social innovation in its own right. There is not yet a clear model for it except the vision of "four girders and eight pillars". As usual, "crossing the river by feeling rocks at the riverbed"[1][2] will be a main approach to such kind of social innovation. This is an incremental and explorative reform paradigm which has been employed by the Chinese reformers for generations. Meanwhile, the environment is too complex and changing too fast for the model of practice ever to be fixed in the transitional context. In such a situation, developmental evaluation can help us do so-called "vision-directed reality testing" (Patton, 2010: 7). By tracking emergent and changing realities and feedback evaluation results in real time can we support the dynamics of innovation and explore the right model for future development. By evaluating the short- and

[1] Deng Xiaoping. (1993). Collection of Papers by Deng Xiaoping. Vol. 3, pp: 174. Beijing: People's Publishing House.

[2] Chen Yun (1995). Collection of Papers by Chen Yun. Vol., 3, pp: 279. Beijing: People's Publishing House.

midterm health reform and development, we hope to learn more about the correctness of the vision held by the innovators and find the right track, rather than test a predetermined model and gauge the success.

3. Goal

To establish a conceptual evaluation framework for mid- and short-term development of the Chinese healthcare system ("Healthy China 2020"), and set up an indicator system, so as to prepare for the development of a systematic evaluation framework for healthcare system in China.

4. Key principles

(1) Pertinence. The indicator system is pertinent to the five areas of the new round of the healthcare system reform and the 12th Five Year Planning for Healthcare.

(2) Comparability

a. Vertical comparability. The indicators can be compared with historical and future health development indicators;

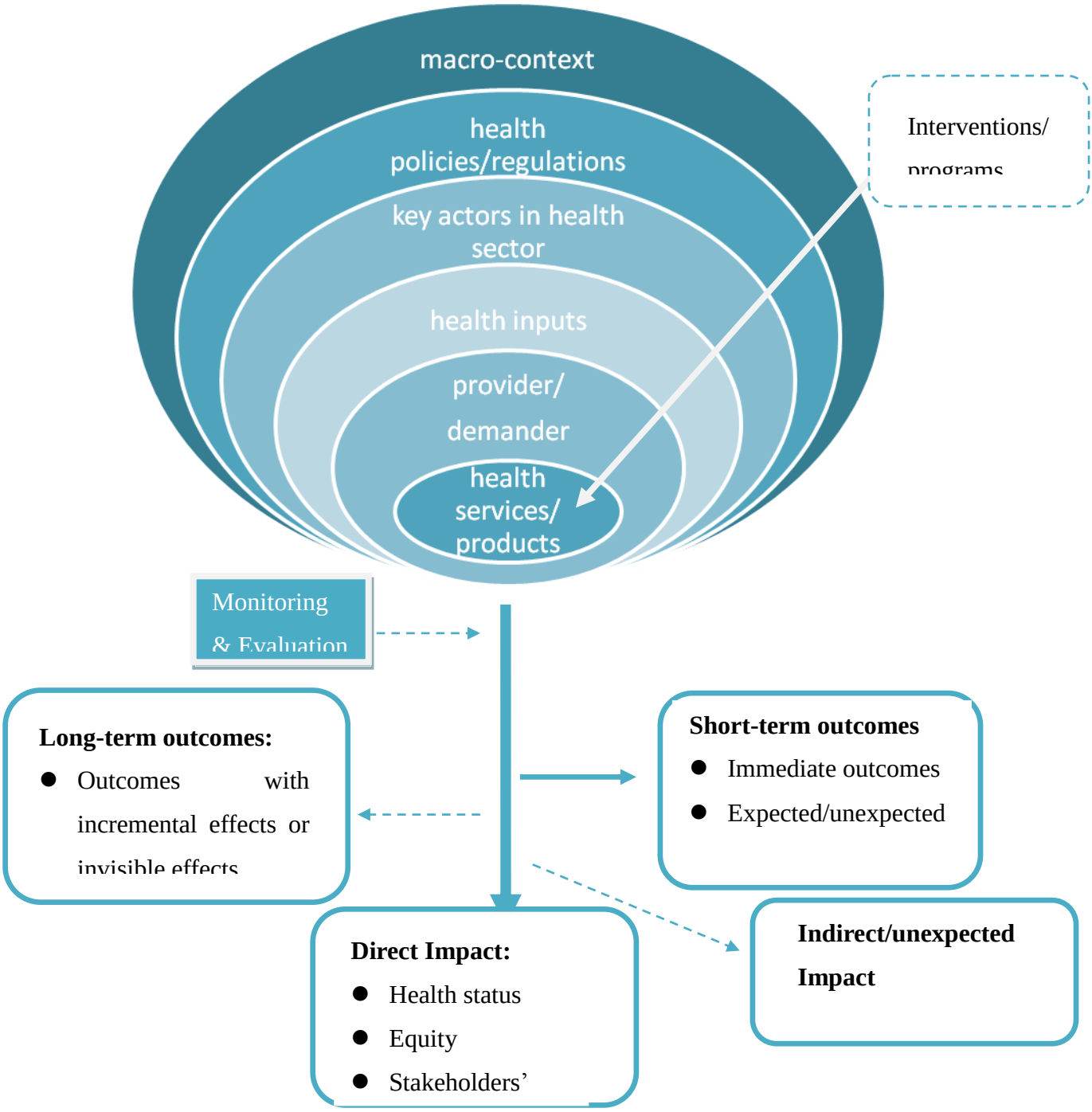
b. Horizontal comparability: In indicator selection, differences between provinces and regions should be taken into consideration to enable the regional comparison. Meanwhile, the indicators selected should facilitate the possible comparison between the Chinese healthcare system and other health systems.

(3) Feasibility: The indicators should be simple and operational. Relevant data should be available and accessible. Data collection process should be linked up with the current health statistic system and healthcare reform monitoring;

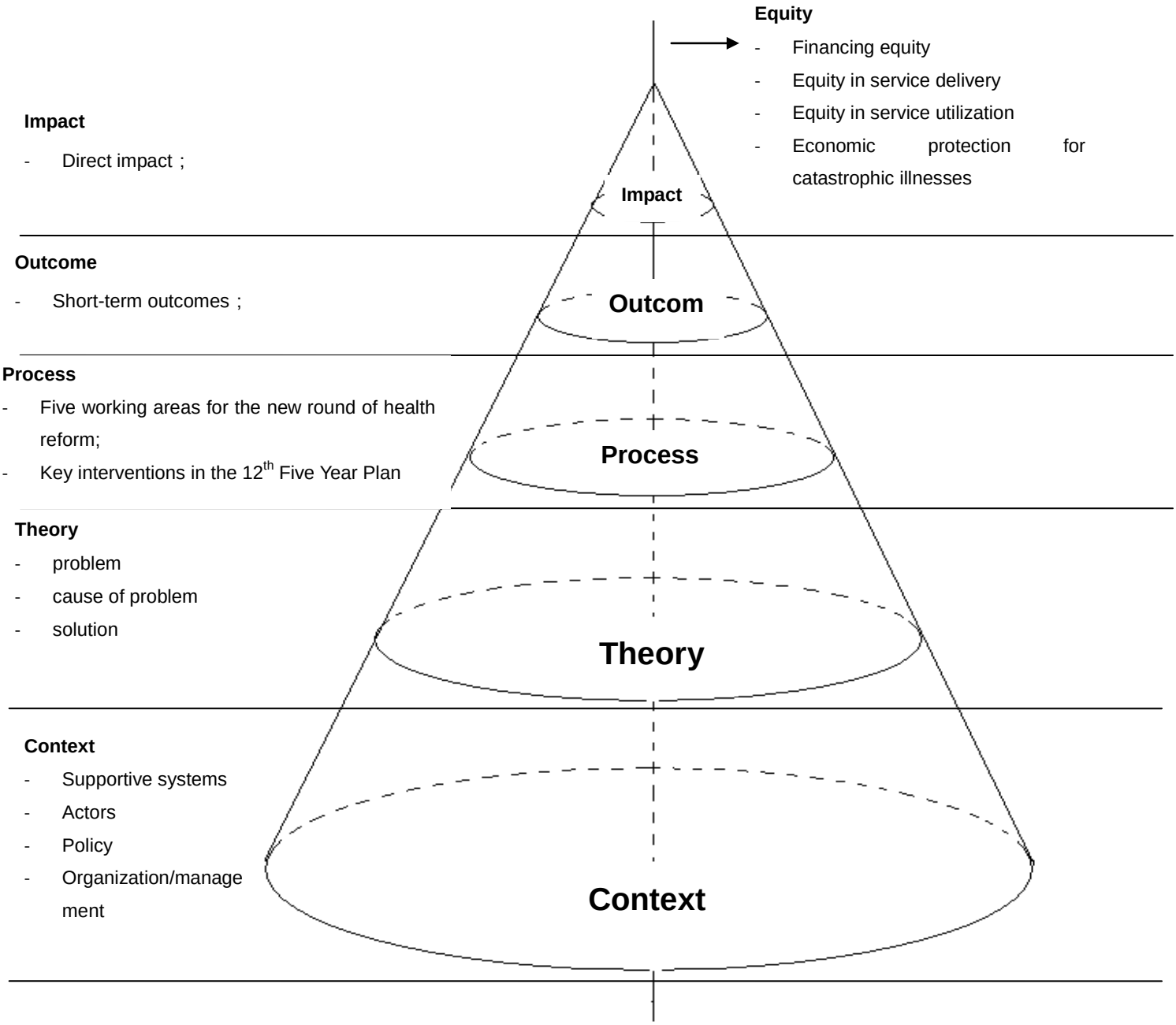
(4) Sustainability: The evaluation framework should have critical influence over the long-term goal setting and future development of the Chinese healthcare system.

5. A conceptual framework of the indicator system for evaluating short- and midterm healthcare system development in China

5.1 Mapping of the healthcare system reform and development process in China



5.2 Conceptualizing the indicator framework



5.3 Specifications of the indicator domains and core indicators

The indicator system has five tiers, namely the context, process, theory, outputs and impact from bottom up. Equity is the axis cutting through the five tiers, representing social justice and health equity emphasized in the recent policies in China.

5.3.1 Indicator domains:

Context indicator domain cover supportive systems (political and legislative systems, economic/financial systems, information, transportation and energy systems, etc.); actors and interest groups; health resource (infrastructure, human, physical and material resources); organization and management (health institutions and information);

Theory indicator domain cover problem, cause of problem and proposed solution;

Process indicator domain include short- and midterm goal for healthcare system reform and development (healthcare reform and key interventions under the 12th Five Year Plan) and long term development goal;

Outcomes indicator domain include short- and long-term outcomes;

Impact indicator domain include direct and indirect impact.

5.3.2 Core indicator groups

Core indicators in context domain:

Supportive systems:

(1) economy : national economy, regional economy and economic status of the population groups; information, transportation and energy systems;

(2) culture: health education, health awareness and behaviors, rituals and customs;

(3) politics: political arrangement, national agenda-setting and local agenda setting, health strategy and decision-making, health governance and regulation;

(4) environment: health-related environmental factors, macro-level factors including air, soil, water and climate change, and micro-level factors such as occupational health and work safety, and food safety and hygiene;

Actors and interest groups:

(1) Formal sector: government, public health institutions, private institutions (for-profit and non-for-profit), agencies, community-led organizations, NGOs, research communities, drug and device enterprises, retail pharmacy, media and patients;

(2) Informal sector: quarks and illegal pharmacists;

Health resources: see the Year Book of National Statistics;

Organization and management:

(1) Human resource management;

(2) Financing mechanism;

(3) Infrastructure planning and construction;

(4) Information management;

Core indicators in theory domain:

Problem:

(1) Defining the problem; (2) perspective of the problem; (3) timing and scope of the problem; (4) target population of the problem;

Cause of problems:

(1) Macro-environment; (2) actors; (3) institutional arrangement; (4) inputs; (5) management and operational mechanism; (6) service provision; (7) health needs;

Design of change/reform mechanism:

(1) Defining the focus of change/reform; (2) consensus among key stakeholders; (3) formation of the change/reform mechanism;

Framework of the change/reform:

(1) Objectives of change/reform; (2) setting of priority areas; (3) reform implementation measures;

Core indicators in process domain:

Accessibility: The capacity of providing the health services needed by the patient in a timely manner and the services can be used by the patient.

Quality: The services provided to patients are safe, effective and continuous.

Efficiency: avoiding waste, including waste in health supplies, equipment, ideas and energy.

Equity: providing care that does not vary in quality because of personal characteristics such as gender, ethnicity, geographical location and social-economic status.

Sustainability: Health reform measures or development programs have the capacity of enduring.

Core indicators in outcomes domain: outcomes of specific interventions or programs in terms of coverage and effects; overall health outcomes , such as population-level health status.

(1) Short-term outcomes (expected and unexpected outcomes): outcomes of interventions and programs, which usually appear immediately after or during the project implementation. Expected outcomes include the expansion of coverage or benefits of certain program, while unexpected outcomes might be negative effects on the other interventions or programs or on certain subgroup of actors. The consideration of unexpected outcome is very meaningful for the risk management of an intervention or program.

(2) Long-term outcomes: invisible outcomes of an intervention or program which may take time to reveal after the completion of the intervention or program. The long-term outcomes may have profound impact on the sustainability of an intervention or program.

Core indicators in impact domain:

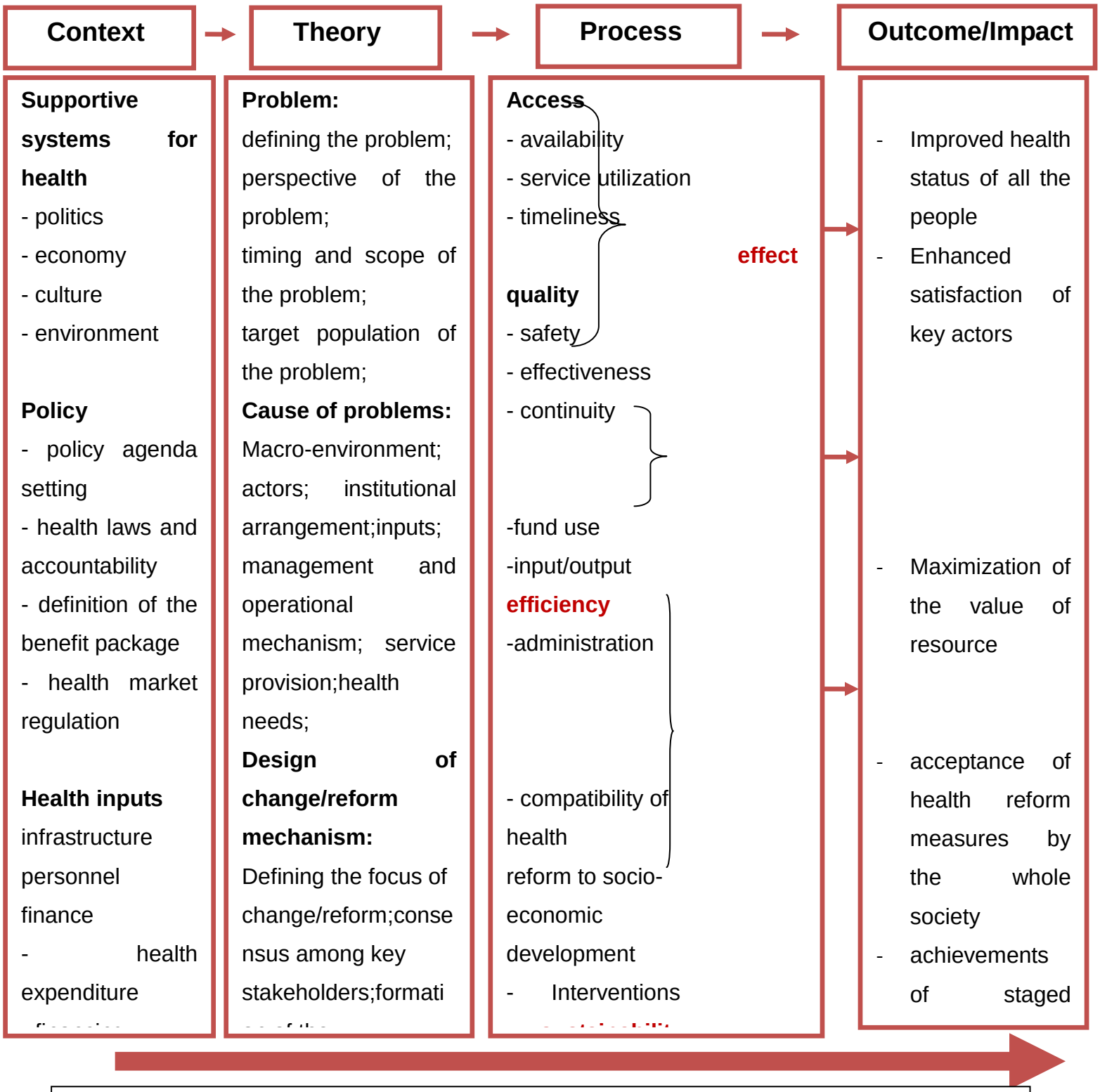
(1) Health status on population level;

(2) Equity of health outcomes;

(3) Satisfaction of various key actors

Core indicators for equity: vulnerable groups' access to services, benefits, and economic burden of disease

5.4 The framework of the indicator system



6. Conclusion and next steps

The above-mentioned indicator system has been developed by the CNHDRC research team with intensive efforts in literature research and reading and consultations with key stakeholders in the health sector in China.

The conceptual framework is just a draft version. The research team plans to organize a workshop and invite Chinese experts and key stakeholders of the project to comment on the framework. What's more, the international experts will also be asked to provide feedbacks on the framework. In order to explain the rationale behind the conceptual framework in details and invite comments from wider audiences, the researchers are writing up a paper that aims for publication on an international journal.

Once the framework has been finalized, the researchers will begin to define the data sources and specific indicators for each group.

References

1. WHO (2009). *Monitoring & Evaluation of China's health care system reform: Global perspectives on a comprehensive framework*. Consultant report completed in September 2009.
2. Alva, et al. (2009). "Measuring the impact of health system strengthening: A review of the literature". *USAID website*.
3. Atun, R. & N. Menabde (2008). "Health systems and systems thinking". *Health Systems and Challenges of Communicable Diseases: Experience from Europe and Latin America*. OECD Publication. Birkshire: Open University Press.
4. Kruk, M and L. Freedman (2008). "Assessing health system performance in developing countries: A review of the literature". *Health Policy.* 85 (2008) 263-276.
5. Murray, C. and J. Frenk (2000). "A framework for assessing the performance of health systems" *Bulletin of the World Health Organization* vol.78 no.6 Genebra June 2000. http://www.scielosp.org/scielo.php?pid=S0042-96862000000600004&script=sci_arttext&tlng=en
6. Patton, M. Q. (2010). Developmental Evaluation: Applying Complexity Concepts to Enhance Innovation and Use. Guilford Press.
7. Zhao, Y. (2001). "Some reflections on the 2000 WHO Report". *Chinese Health Resources*. 2001 (1).
8. Jiang, Q & S. Hu (2002). "Comments on the 2000 WHO framework for assessing health systems performance". *China Health Policy.* 2002 (1).
9. Jiang, Q & S. Hu (2002). "Some inquires about the 2000 WHO framework for assessing health systems performance". *China Health Care Management*. 2002. Vol. 18 (3).