

Université de Montréal

# **Development of a Chinese version WHO Self-Assessment Tool for Evaluating Health Promotion in Hospital**

**Health promotion in Hospital and China Hospital Management**

par  
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Development of a WHO Self-Assessment Tool (Chinese Version) for Evaluating Health Promotion in  
Hospital  
Health promotion in Hospital and China Hospital Management

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## Résumé

Afin de développer un instrument de la version chinoise d'OMS outil d'auto-évaluation de la promotion de la santé dans l'hôpital(OMSOAEPSH), un processus complexe de traduction a été nécessaire. De plus, de tester la fiabilité et la validité, un enquête a été menée à la fois en Chine et au Canada (Montréal), cette recherche a été le premier fois d'adopter un contre-culture de l'approche complétée qui comprend : cet origine outil en anglais d'OMSOAEPSH proposé par l'OMS a été traduit et adapté en Chinois; la traduction de l'édition source de l'OMSAÉPSH en chinois, puis sa retraduction en anglais par une autre personne afin de tester la pertinence de la `traduction culturelle`, ensuite trois professionnels de la santé qui connaissent bien l'anglais ont commenté la qualité de la traduction. Une méthode d'échantillonnage non aléatoire a été utilisée. Huit professionnels chinois qui travaillent au sein d'organisations de santé à Montréal ont d'abord été interviewés pour finaliser une épreuve pilote. Ensuite, une enquête formelle a été effectuée dans 3 capitales provinciales en Chine (Shanghai, Kunming et Hefei) au cours de l'été 2008. Au total, quarante gestionnaires issus de vingt-deux hôpitaux de ces trois villes ont participé à la recherche. Deuxièmement, pour fournir un première description de la situation actuelle de la chine de la promotion de la santé en utilisant cette outil chinoise, ces trois villes ont les différents niveaux de développement économique et de culture différente mais ils sont tous profondément influencé par la médecine traditionnelle chinoise. Le modèle de gestion des hôpitaux chinois, l'influence et le rôle de la Médecine Traditionnelle Chinoise (MTC) pour développer la promotion de la santé en Chine ont fait l'objet d'une discussion approfondie dans cette thèse. Tous les répondants ont été volontaires pour participer à la première enquête et la reprise de l'enquête après trois – sept jours. La fiabilité des analyses de cohérence interne par Alpha de Cronbach, inter-évaluateurs fiabilité par analyses de corrélation, Test-retest fiabilité par Paire Sample T-test, la validité des essais par le biais de l'analyse factorielle et Pearson Bivariate Correlations analyse. NPAR test a été utilisé d'analyser la promotion de la santé entre les différentes villes et de comparer leurs différents niveaux entre les différent hôpitaux de grade.

**Résultats :** Seul un item sur quarante (le mot <contenter>) a été jugé unanimement comme ayant un sens différent par rapport à la version originale. Le coefficient alpha de Cronbach's était 0.938 pour l'ensemble des items et de 0.896 pour l'ensemble des domaines. Cette total de Cronbach Appha de l'coefficient pourrait être affecté par le nombre d'indicateurs. L'alpha de Cronbach's de la norme 1 à norme 5 était : 0.79, 0.82, 0.81, 0.79 et 0.76. L'analyse du modèle 'Split-half' de 0.1 à 1, indiquant qu'il n'y avait aucune différence significative entre les valeurs de l'essai initial et l'essai de répétition de chaque article (pré et post test). Ceci montre que l'outil (version chinoise) est fiable. L'analyse factorielle confirme la validité d'OMSOAEPSH chinoise en général, mais sa validité a besoin de nouvelles recherches théoriques et empiriques. Les données qualitatives montrent que tous les participants pensent que cet outil d'auto-évaluation est avantageux en théorie mais, en pratique, seulement 17 des 35 répondants [chefs d'hôpitaux] entendent utiliser cet instrument dans leur milieu de travail, 15 des 35 gestionnaires d'hôpital l'ont refusé, et 3 employés ne sont pas sûr de l'utiliser. Le score moyen de promotion de la santé, du plus élevé au moins élevé était: norme 5 : 28.95 (72.4% du score plein), norme 4 : 35.7 (71.4%) ; norme 3 : 21.34 (71.1%) ; norme 2 : 28.85 (68.1%) ; norme 1 : 28.17 (62.6%). Le score mayen d'évaluation pour les différents hôpitaux de Grade III à Grade I était :

154.19 + 7.34 (n=21), 158.67 + 10.7 (n=9), 144.82 + 14.54 (n=11). Le résultat d'analyse de variance a montré qu'il n'y avait aucune différence significative entre les valeurs de différents Grades hôpitaux. Cette thèse a souligné les valeurs caractéristiques du système de soins chinois, notamment que la prévention de la maladie est primauté, le service centré sur le patient- sens. La MTC, combinée avec la médecine occidentale, ainsi que le rôle de l'hôpital, doivent permettre la promotion de la santé dans les communautés environnantes ; ce sont les stratégies pour développer la promotion de la santé, même si la Chine présente un certain nombre de conditions difficiles à ce développement. Cette recherche crée une base pour de futures recherches sur une promotion de la santé efficace dans les hôpitaux chinois.

**Mots-clés : promotion de la santé, hôpital, Chine, instrument, auto-évaluation, traduction, fiabilité et validité, culture et valeurs.**

## **Abstract**

The first purpose of this research is to develop a Chinese version (WHO self-assessment tool for Health Promotion in Hospital(WHOSATHPH), and test its reliability and validity through a pilot test in Canada (Montréal) and spot field investigation in China, this research was the first time to adopt completely cross-culture approach which includes:translated the source English edition tool into Chinese, then back translated it into English. 8 Chinese health professionals who have worked both in China and Montreal were investigated to complete the pilot test. Then 3 health professionals whose work language is English (1 Native American, 1 evaluation professor, the author of WHOSATHPH) commented the back-translation quality. The spot field investigation was performed in three Chinese capital cities, Shanghai, Hefei and Kunming from 5 June to 30 August 2008. Non-probability sample was used to survey 40 hospital leaders who are from 22 China hospitals, and 3 health management researchers (include 1 government officer). The second purpose of this research is to provide a primary description of China current HPH development by using this Chinese version WHOSATHPH, and to discuss China current hospital service evaluating principle and management model, and analysis the value and culture of TCM and its role and influence to China HPH development. Three capital cities(Shanghai, Kunming, and Hefei) which stand for different economic development level and different culture context feature but all deep influenced by TCM were investigated. 22 hospitals and 35 hospital leaders were given interview while they answered the questionnaire. All the respondents were voluntary to take part in the first survey and the repeat survey after 3-7 days if they would like to. Reliability analysis include internal consistency(Cronbach Alpha),inter-rater reliability(Correlation analysis),Test-retest reliability( Paire-Sample T-test), Validity Test through factor analysis and Pearson Bivariate Correlations analysis. NPAR test was used to analyze the different cities and different grade hospitals comparison. **Result:** Only 1 word <satisfy>) was marked different meaning comparing with the back translation English version with original version by all of them. Reliability measures utilized Cronbach's Alpha, the general coefficient of the Chinese version WHOSATHPH was 0.938, Cronbach's alpha for the domains was 0.896. The Cronbach`s alpha for

five standards from one to five were: 0.793, 0.819, 0.807, 0.785, 0.755. 8 groups data were used for Inner-raters analysis, result shows that Shanghai respondents had comment consistency but Hefei and Kunming respondents didn't show inner raters assessed consistency. Pair T-Test for 40 items between pre and post test, the significance p was from 0.1-1 which indicates not statistically significant difference. Factor analysis shows this tool has the general theory construct validity, but the domain construct validity has not shown the construct validity. The results showed that Chinese version WHOSATHPH has high internal consistency but the high Cronbach's Alpha might concern to the number of items. All the respondents thought WHOSATHPH was valuable in theory research, 15 respondents refused to use this instrument in their work, only 17 respondents accepted it, 3 respondents were not sure to use. The rejective reasons were: no government finance budget support, no demand from the government, difficult to follow. The acceptable reasons were: help to improve the work quality, help to guide HPH development. This research result shows that the Chinese version has reliability and general construct validity, but its validity needs further conceptual and empirical research to prove. ① For five standards from the highest to lowest: standard5 (continuity and cooperation) 28.95(72.4% of full score), standard4 (healthy workplace) 35.71(71.4%), standard3 (patient information and prevention) 21.34 (71.1%), standard2 (patients assessment) 23.85 (68.1%), standard1 (management and policy) 28.17(only 62.6% of full score). These results show China hospitals have better HPH development level, their means are all over 60% of full score, ②The mean of the total score for different grade hospitals were: Grade III (n=21) 154.19 ± 7.34, Grade II(n=9) 158.67 ± 10.7, Grade I (n=11) 144.82 ± 14.54. Variance analysis result shows that there was no statistically significant difference between different grade hospitals. However, the last conclusion needs further research with large random sample size investigation. This thesis discussed the quality and weakness of China health care system and its successive strategies to develop HPH in very poor finance support, huge population, and difficult social condition and polluted environment. Disease prevention first, patient-center, combined the TCM with west medicine are regarded as the successive strategies for China HPH development. This research created a foundation for future HPH research.

**Key words:** Health promotion, hospital, Self-Assessment, Instrument, China, Translation, Reliability and Validity, Culture and Value

## Purpose:

- 1 Develop a Chinese Version of WHO Self-Assessment Tool for Health Promotion in Hospital and test the reliability and validity of the new self-assessment tool.
  
2. The second goal of this research is to provide a primary description and analysis of the current China HPH situation through the investigation results of this Chinese version WHOSATHPH, discuss China current hospital management model and evaluation stands , analysis the value and culture of TCM and its role and influence to China HPH development.

## The abbreviation list in this thesis

NO	Full Name	Abbreviation
1	The Australian Council on Healthcare Standards	ACHS
2	The Canadian Council on Health Services Accreditation	CCHSA
3	European Foundation for Quality Management	EFQM
4	Health Promotion	HP
5	Health Promotion Hospital	HPH
6	The Health Quality Service	HQS
7	the International Organization for Standardization	ISO
8	the Joint Commission on Accreditation of Health Care Organizations	JCAHO
9	Joint Commission International	JCI
10	Life Expectancy	LE
12	Ministry of Health Republic People China	MHRPC
13	Organization Economic for Cooperation and Development	OECD
14	Traditional Chinese Medicine	TCM
15	Total Quality Management	TQM
16	WHO Self Assessment Tool for Health Promotion in Hospital	WHOSATHPH

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---- Zhou Fengqiong

## **Context**

## 1. Conceptions

**Health** is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity (WHO, 1946). This definition has never changed since its publication in 1948 and has been accepted gradually by people of the world.

**Health promotion** is the process whereby people can increase the control over and improvement of their own health (Ottawa Charter for Health Promotion, 1986). In 2005, the WHO Bangkok Chapter defined Health Promotion as a core function of public health that 'contributes to the work of tackling communicable and non-communicable diseases and other threats to health', and, 'Health promotion is the process of enabling people to increase control over their health and its determinants, and thereby improve their health'(WHO, Bangkok Chapter,2005). Furthermore, the Bangkok Chapter proposed that health promotion should also mean mental and spiritual well-being, as it too is a human right that also includes a positive concept of health and quality of life.

**Hospital** is a very important health institution to provide treatment by specialized staff and equipment, and often but not always provides for longer-term patient stays` ( Wikipedia, <http://en.wikipedia.org/wiki/Hospital>). Toward the end of the 19th century, because of the discovery of anaesthesia, the hospital's functions were revolutionized by the improvement in sanitation and treatment. In large cities, hospitals have become huge medical centers that are well equipped. Such hospital not only treat diseases, but also offer education and training, program to medical staffs, performs vital research, makes reference to identified pathogenic mechanisms and treatment, and helps patients with convalescent and social problems (The Columbia Electronic Encyclopedia, 2007). As an institution for diagnosing and treating the sick or injured, hospitals are classified into public (government-owned) and private (profit-making or not-for-profit), or they are named as general hospital, accepting all types of medical or surgical cases, or special hospitals which limit services to a single type of patient or illness, e.g. mental hospitals ( Britannica Concise Encyclopedia, 2008)

**Health Promotion in Hospital (HPH)** is a concept for hospital development which builds upon the health promotion concept in WHO Ottawa-Charter. The health care services in HPH include five major action areas which include: 1) health promotions in hospital settings; 2) health promoting workplaces; 3) the provision of health related services, training, education and research; 4) the hospital as an advocate and change agent for health promotion in its community/environment; and, 5) the healthy hospital organization (Jürgen M. Pelikan et al, 2001). Oliver Groene thought HPH means that hospitals should: a) provide high quality comprehensive medical and nursing services; b) develop a corporate identity that embraces the aims of health

promotion; c) develop a health promoting organizational structure and culture, (including active, participatory roles for patients and all staff), and, d) develop itself into a health promoting physical environment that actively cooperates with its community service (Oliver Groene, 2006). In 2004, Groene developed a Self-assessment Tool for evaluating HPH based on the conception of HPH in the Budapest Declaration, and then revised the tool in 2006.

The authoritative and widely quoted principles for HPH are in the Vienna Recommendations (WHO Vienna Recommendations, 1997). The recommendations proposed six principal standards of HPH which are accepted diffusely as follows: 1) to promote human dignity, equity, and solidarity through the development of professional ethics and the acknowledgement of different needs, values, and cultures between different population groups; 2) to be oriented towards quality improvement and well being of patients and their relatives as well as staff by protecting the environment and becoming learning organizations; 3) to focus on health with a holistic approach but not only on curative services; 4) to provide health services that focus on patients and their relatives to facilitate the healing process and contribute to the empowerment of patients; 5) to use resources efficiently and cost-effectively, allocating resources based on health improvement; 6) to develop close links with other health care institutions and communities.

## **2. The Hospital's Role in Improving Health**

### **2.1 The important signification of developing HPH**

First of all, hospitals play a central role in the health care system (Martin McKee and Judith Healy, 2002, WHO Vienna Recommendations, 1997). Hospital services can potentially contribute to regional population health significantly (McKee 1999). Danzon found that ineffective hospital service systems will reduce positive health effects or even have negative impacts on regional health (Marc Danzon 2002). Since 1986, the WHO Ottawa Charter proposed that the goal of health promotion meant that all people could achieve their fullest health potential, and that hospital services and functionality must extend itself to include underserved groups. That is, hospitals have to play an increasing important role in the utilization of social and personal resources to reduce the differences in current health status, and to ensure equal opportunities for people to use health resources. Hospitals therefore cannot isolate themselves in narrow traditional domains that focus only on medical and surgical services and ancillary services such as laboratories and medical equipment services, etc.

Secondly, hospital expenditures are the main part of total health investment in most countries. In most European countries, health care expenditure is at 10% of GNP (Gross National Product) and hospitals consume between 40-70% of national health care expenditures (Jürgen M. Pelikan, 2005). 50% of western European countries and more than 70% of the countries of the former Soviet Union put main part of expenditures in healthcare on hospitals (Marc Danzon 2002).

China's hospital expenditures are always over 60% of total health expenditure since 1949, and in 2002, hospital expenditures were at least 67.68% of total health expenditure (Du Lexun, 2007). Data from Canadian Institute Health Information (CIHI) shows that hospital expenditures had been always over 30% of total health expenditures in Quebec and in Canada before (CIHI, 2005). In 2008, Canada's health expenditure reached \$171.9 billion about 10.7% of [Gross Domestic Product](#) (GDP), with total hospital expenditures at \$48.1 billion, accounting for 28% total health expenditures. This is the largest proportion of these costs, though hospital expenditures are declining. However, if one adds in the physician expenditure (21%) and drugs expenditure (10%) which is inherent with hospital service, the expenditures should be over 66% of total health expenditures (CIHI,2008). In 2007, the United States (U.S) health investment is 15.2% of GDP, and hospital expenditures were 30.8% of total national health capital, and if one added 21.2% of physician clinic service and 10.1% of prescription drugs, the expenditures were 62.1% of total healthcare cost (The Henry J. Kaiser Family Foundation, 2007).

Thirdly, hospitals usually produce, accumulate, and disseminate a great deal of health knowledge that impacts the local people, influences local health structures, and can even impact professional practices elsewhere. In some cities, the hospital is the largest employer, for example, 30 000 hospitals in Europe employ 3% of the total workforce (Jürgen M. Pelikan, 2005). Furthermore, hospitals are the crowded areas where a large number of people visit or stay on a daily basis. In some countries, every year, up to 20% of the population has contacted the hospitals as patients, plus plenty of visitors. Hospitals can reach and do outreach to a huge percentage of the nearby population. In addition, a hospital is a special place which mixes a mass of patients and staffs. Furthermore, hospitals could impact the patients and/or their relative's behavior more effectively than any other institution. Patients are more easily influenced when they are sick and staying in the hospital, especially, they tend to most accept the health advices from their responding health professionals when they are ill. Zöllner .et al (2003) also found out that the relationship between providers and patients in health care implies that decisions made by the users and their providers affects health care processes and outcomes (H. Zöllner, G. Stoddart and C. Selby Smith,2003).

Fourthly, hospitals can become potentially hazardous workplaces. In one hand, people who work in hospitals always have the potential risks to expose in various toxic, infectious, chemical, or physical agents. On the other hand, people have to work under high stress related to the features of the work and the responsibilities involved. Hospitals consume a wide range of goods and produce high amounts of waste and hazardous substances. However, that also means hospitals can develop the strategies to greatly reduce their waste and environmental pollution in general. As consumers of large amounts of products, they can favor healthy products and environmental safety.



## **2.2. HPH principles offset the defects of current hospital evaluation system**

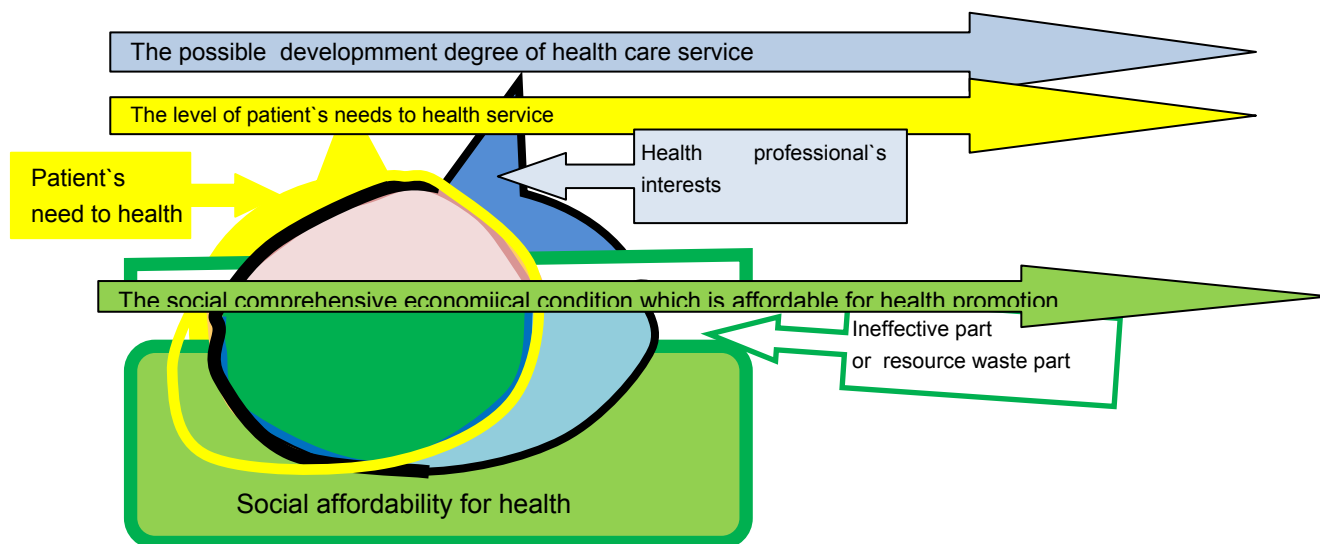
Since the onset of the 21st century, an aging society and the changing spectrum of disease which threatens lives and habitats have caused emerging needs in health care. Since these needs are changing and growing rapidly, and the economic problems spreads worldwide, governments must finance healthcare budgets more effectively. Particularly, as the world becomes more interdependent, rapid changes (sometimes highs and lows) occur in many national economies, especially developing countries, and in particular, in most OECD countries. scientific knowledge in the health sciences fast progressing cause the unmatched government health expenditures with the economic development level. ). A crisis looms in terms of limited health resources and healthcare financial investments conflicting with the unlimited growing needs of health service provision, and the public's low endurance on high healthcare costs but high expectations on hospital service quality and contingent quality improvement. As a result, the healthcare system has experienced unprecedented immense pressure to fend off multiple crises such as the finance crisis, knowledge crisis, value crisis, management crisis, and ethical crisis (Contandriopoulos A.-P. et al. 2000).

How to define good quality of service for hospitals, how to implement the good quality of service, and how to evaluate what quality of hospital services are necessary and proper to be adopted to gain the consent of patients, professionals, health providers, financiers? Both the health care performance effect and public health policy need to be crucial considerations.

During the past few decades, well known quality control and management theories developed from industry and business management theory have been adopted by the health care system and hospital management to improve the quality of hospital services. For instance, the International Organization for Standardization (ISO), Total Quality Management (TQM), and principles from the European Foundation for Quality Management (EFQM) have been adopted. Moreover, additional professional tools and strategies have been applied widely in hospitals with great success. For example, the United States has two most famous evaluation organizations all over the world, the Joint Commission on Accreditation of Health Care Organizations (JCAHO) and Joint Commission International (JCI). This evaluation tools have performed importance influence to improve the hospital management level and ensure the medical service safety and quality. However, their inherent defects also cause the more and more expensive health service and cause the hospitals become a big financial burden to most industry developed counties. Because the health organization tends to seek for more and more advanced health technique, and the traditional evaluation hospital system encourages the health professional pay more attention on improving the health science and knoweldge. However, patient's interests is just to remove disease and free their suffering of illness.

As it was showed in figure1 the yellow shape and the blue shape, patients`interests and needs are not completely identical with the health professional desiration to their service even though they share the most common parts(see figure 1 the pink color part). Moreover, the possible service avaiable level which the health organization can offer for patients usually is higher than the affordable ability of the social comprehensive economical conditions. Patients` real needs to medical service may be different and lower than health professional interest to develop health service(see figure 1).

**Figure1 The needs and the relationship between patient, hospital and community**



**Note:**

Yellow shape means patient`s needs to health service;

Blue shape means hospital`s interest to improve the health service

The bright green box means the reality social comprehensive conditions which are available for support health promotion development.

The white part of the box means the possible degree that a community can support health promotion but waste its potential health resource and does not reach its optimal level.

The pink color means the unrealized common interest and demand to the medical service both for the health provider andfor the patients

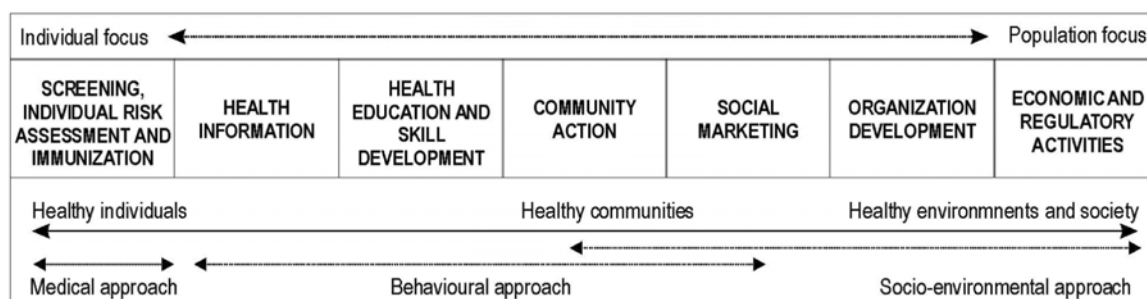
The dark green color means the realized common interest and benefit for the health organization, the patient and the society demands and available resource.

In figure1, the sharp horn means the interest`s direction , the yellow color shap means patient`s needs and interest to medical service. And the blue shape is the interest and self-cognition of medical professionals to their service. The traditional hospital evaluation standard system usually over emphasizes the role and influence that the health professionals act on health promotion. Therefore, it encourages the health professionals to pursue more and more higher level medical service quality as possible as they can, even this level medical service might not attract the patients` interest and beyond the society finance affordable. The traditional hospital manage theory model and evaluation standard and core value do not consider much the different needs of

the health service quality between the health professionals interest, the patients' needs and the economic developing level and finance affordable ability of a community. So this kind of hospital evaluation system model is spontaneous to stimulate the health expenditure increasing as the medical science and technique progress and population aging.

However, HPH theory philosophy and value are very different with the traditional hospital evaluation system. HPH thinks that the hospital should not only focus on improve medical service quality in hospital during the process of treatment, but also focus on patients outside the hospital to prevent disease and health promotion by means of its influence to the public and the community and through the cooperation with the relational health organization and community organization. HPH emphasizes the common responsibility of health promotion that sharing with the patients, community, it jumps out from the limitation of theory frame of the traditional hospital evaluation standard that focus on the medical service within hospital. For example, Tannahill A. thought that health promotion was a multifactorial process that operated on individuals and communities by means of education, prevention, and protection measures( Tannahill, 1985). Vive Speller et al thought that health promotion methods may include diverse activities refer to raising campaigns, provision of health information and advice, influencing social policy, lobbying for change, professional training, and community development that often in combination in complex interventions( Vive Speller, Alyson Learmonth, DHarrison, 1997). Dr. M. Bensber( Bensber M. 2000) constructed a model of HPH strategy to evaluate and develop HPH (see figure 2-1 ).

Figure2-1. The development strategies and assessment domains of HPH(Bensber M., 2000)

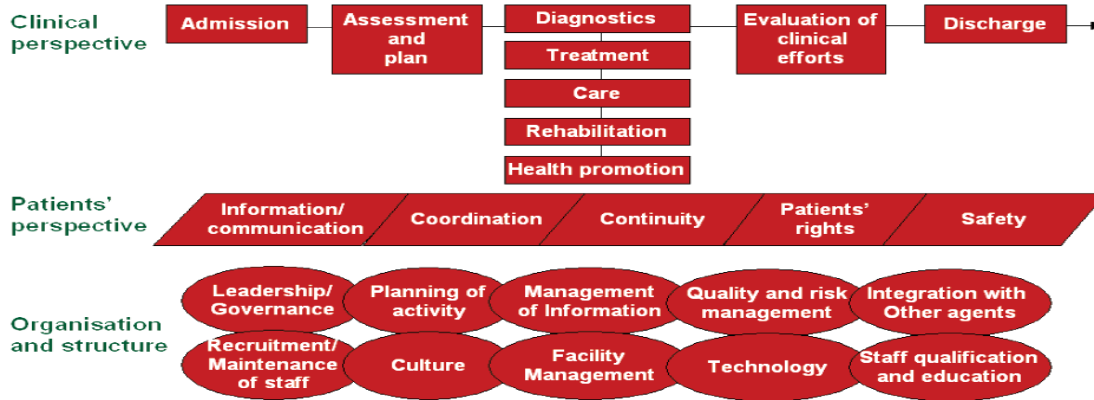


Bensber developed a complementary measure for health promotion in medical practice. From his theory model of HPH, Bensber displayed the special strategies in clinic practice that were different with traditional hospital management evaluation standard. Even though Groene thought these strategies were major conceptual differences with those theories that focused on health promotion actions( Groene Oliver, 2006). In Bensber's theory model, the health service of HPH

not only refers to individual health service but also to population health care(see the first line of figure 2-1). It meant the HPH should not only serve to patients in treatment procedure in hospital, but also extend its service before and after patients stay in hospital. This is the first different core value between the HPH theory and any other traditional hospital management theory. The traditional standard system for evaluating hospital service only considers of individual health service happened in hospital (medical treatment service). The second different core value between HPH theory and traditional hospital assessment theory is HPH focus on population health promotion, that means hospital should take charge of disease prevention and public health promotion around its community. For this reason, HPH has to provide some strategies refer to health education and empower patient's right to improve patients' ability to health self-protection and health maintain. The traditional hospital evaluation model only emphasizes the responsibility of health professionals' role and influence to improve patient's health but ignore the public and patients role and influence.

These two core principles of HPH theory, the individual health service serving area and the population serving area should be coherent together, they can not separate with each other. During the HPH practice, these two strategies ought to supplement and encourage each other which can achieve more effective health performance. Groene developed HPH evaluated standard model based on Besber M theory model. Besber M. defined the individual service as the disease's diagnosis, risk assessment, evaluation of patient's immunization, providing health information through education course or/and through pamphlets or /and paper materials or/and others electronic materials (These methods are also used to population health education service ways). Groene thought HPH has to improve patients' health and their ability of self-protection since the admission step, it should be from the first line the clinic perception to the third line, the patient's perspectives. He proposed the detailed strategies and principles to develop HPH ( see in figure 2-2). The goal of these actives is to improve the individual healthy knowledge and the patients' ability of self-health protection.

**Figure 2-2: The frame of health promotion hospital theory (Groene Oliver,2006)**



From figure 2-2, at individual medical service level, these strategies of developing HPH should be melt in every treatment process in a health promoting hospital(see the first line, the procedure of patient treatment in a hospital). Moreover, patient should have the proper optional right to their treatment methods that are made by their doctors(see the second line patients`perspective), patients` right should be respected by the health professionals.

Although the theory and principle of HPH and traditional hospital evaluation system share some common value and principle in the service of quality management, for example,the medical treatment service( at the first line), protect the patients` safety( and the second line), develop reasonable organization and structure for the hospital (at the third line), however, they hold the different value, different principle and different strategies on how to perform the medical quality management. Besides the hospital role, HPH more emphasizes the patient and community`s role and responsibility in health promotion, and the traditional hospital management theory and evaluation standard system only focus on hospital itself and on health professionals duty(Groene Oliver,2004).

The HPH principle for the population viewpoint of means the community role on health promotion, namely to shape well social health culture and to develop a healthy marketing through large size participants action. Because HPH theory thinks that hospital cooperates with community can make health service more easily access and help improve the health service equity, therefore, HPH stresses the cooperation with others organizations to offer continue health service for patients. Furthermore, HPH emphasizes the reasonable technic development which matches the local economic development level, namely, the hospital expenditure should match the local finance budget affordable condition. HPH should offer the proper medical service which meet the local health resource collocation by means of the regulatory measures that can exploit the health resource optimally. These different value and philosophy between HPH and traditional hospital management theory indicate that hospital is not an isolated organization any more in 21 century, hospital is one core part in a health system net that can influence total health promotion

developing level, hospital has to be reorganize and restructured to adapt to the health promotion need in new century.

Another important principles of HPH is disease prevention first. In this view, hospitals should take charge of maintenance and improvement of health by means of protection or development of positive health interventions. Groene Oliver thought that hospitals can target of performance prevention or treatment with reference to a specific diseases, moreover, hospital can offer care service to meet patient's specific needs, as long as these procedures are applied in an empowering manner (Oliver Groene & Mila Garcia-Barbero, 2005).

HPH theory thinks that disease prevention is more important than diagnostic and curative services for health promotion. Rootman defined the concept of HPH as something that should perform a role of enabling individuals and communities to take on more power over the personal, socioeconomic, and environmental factors that affect people's health and to enhance participation through involving all concerned factors at all stages of the process (Rootman et al, 2001). In order to improve hospital adaptation to current society demanding in a rapidly changing internal and external environments, WHO advocated the strategies of HPH to improve the quality of health service through health education, empowering patients' rights, self help movements, health at work, hospital hygiene, the ecological movement etc strategies that for personal and organizational development, quality management, project management, etc. These strategies aim to perfect hospital structures and organization, to improve the processes and outputs of service (see figure 4), to control long term costs and help to provide better quality healthcare service.

### **2.3 HPH strategy helps to build up a more effective performing healthcare system**

Even the current most famous hospital evaluation standards systems have been adopted all over the world for several decades, for example, JCI, ACHS, CCHSA, HAS, HQS, JCAHO, no of them can provide an universal strategy to well resolve the more and more arduous challenges that the health and hospital managers have to faced and will have to face. For example, the inequality of health service access, the restricted health resource vis-a-vis people's unlimited needs for health service, the unconfined possibility of developing medical science and technique vis-a-vis the conditioned finance budget, the two pair of conflictions will forever exist among the patient's needs for health service, and the desiration of the health specialists questing for the further high level profession, as well as the demand of society comprehensive development.

Although there few strict designed case-control research to prove the effect of health promotion between HPH and Non-HPH, to prove the effectiveness that the principles and strategies of HPH can improve the performance of the region health care system, however, there are many rough evidence cases to support the effectiveness and influence of HPH strategies and principles for a

country or region. For example, Canada and the US. Canada is the first country who proposed the health promotion conception and one of the important member countries who practiced health promotion movement. Although Canada doesn't have the international hospital evaluation system as US, Canada health care system perform more effective than US.

JCI is the best known of a large number of active healthcare accreditation groups in the USA, and is even known as a worldwide public authority to evaluate hospital service quality. In United States (U.S), a hospital should meet JCAHO accreditation so that it can meet the "Medicare Conditions of Participation" which is a requirement for Federal Medicare reimbursement. However, even though the U.S health expenditure is 15.2% of GDP, \$2.26 trillion, the U.S invests 62.1% capital on hospital and its supporting services, even the health expenditures per capita is the highest of the world for years, reached to \$7,439 in 2008, nevertheless, American people still don't have the longest life expectancy in the world, ( an American's life expectancy (LE) male/ female is 75m/80f lower than its neighbor Canada, whose LE is 78m/83f). Also, the mortality rate of children under 5 years of age is more than 2 per 1000 lives comparing with its neighbor Canada(6/1000 lives), the US is 8 per 1000 live births (WHO health statistic, 2008). For these core health indicators, US is also higher than many others OECD (Organization Economic for Cooperation and Development) countries, for example, Canada, Australia and some Europe countries(OECD, 2004). Moreover, Canada's health expenditures is less than U.S, Canada is \$4,867 per person and the health expenditure is only 10.6% of GDP. Furthermore, the U.S has 15.3% of the population and 45.7 million people without health insurance, but Canada's health insurance cover 100%.

As it has been discussed above related the typical case of United State and Canada, although most of these standardization and evaluation organizations have been widely implemented in most central medical units, these traditional evaluation standard system don't help those countries build up more effective performance health care system. Moreover, these evaluation standards systems have a common noticeable lack of patient orientation and clinical outcomes effects in their implementation. Also, none of them is universally accepted by health professionals all around the world (WHO Oliver Groene, 2006). In 2000 the world health system performance report, WHO ranked the U.S. health care system first in expenditure, but 37th in overall performance and 72nd by overall level of health (WHO health performance report, 2000). Karen Davis (2008) pointed out most people have found the United States' health system performs relatively poorly, particularly poorly in terms of providing care equitably, safely, efficiently, or in a patient-centered manner. A survey of 1026 Adults by the Harvard School of Public Health and Harris Interactive in March 2008 showed that only 45% Americans thought the US has the best health care system(see table 1).

**Table1 American people assesses their health care system**

	U.S. is...			
	Better	Worse	Same	DK/Ref
Canada	40%	30%	4%	26%
France	31%	14%	3%	53%
Great Britain	37%	17%	6%	40%

Source: *Debating Health: Election 2008*, Harvard School of Public Health/Harris Interactive. March 5-8, 2008

<http://www.hsph.harvard.edu/news/press-releases/2008-releases/republicans-democrats-disagree-us-health-care-system.html>.

Even though Canada and US has very similar political system, similar social and natural environment and the same industry economic develop level, nevertheless, as the initiator of modern HP movement and one of the leadership of modern HPH, Canada develops a quite higher effective health care system performance than US, though US has more famous traditional international quality evaluation standard system than Canada. Besides Canada successive experiences, some Asian countries and cities have the same successive practice experiences to implement the quite higher performing effect for health care system development through carrying out the value and principle of HPH.

For example, Japan, Korean, Singapore, Taiwan, Hong Kong, etc, these Asian countries or cities have the similar level of economy development and the similar political system and social management system with western developed countries (North American and Europe), however, they all implement more higher effect of health care system in health promotion, even though they also all adopt western medicine education system and they have the similar hospital management system. The ultimate difference between these Asian counties and cities with western countries is they hold very different value and culture to develop health promotion of their health care system. Influenced by the culture and core value of TCM(Traditional Chinese Medicine), these Asian counties and cities all retain the same culture and value of health promotion in developing their health system. TCM advocates the same value and principles of health promotion with modern health promotion theory for several thousands years, for instance, disease prevention first, self health promotion and protection, the important role of nutrition, lifestyle and environment to health promotion and protection, etc.

For instance, Japan. Japan is one of the Asian countries influenced deeply by TCM culture and value for long history. Japan has performed its national hygienic education as one of its modern health promotion policy in 1950s(Hirobumilto, 1986, Huang Yawen, 1994). Since the end of the 1970s, health promotion has become a national policy and law as the spectrum of disease changing and the aging population growing in Japan. In order to control rapidly growing health expenditures and to improve public health level as well, the Japanese government regulated that



at least 5% of health insurance expenditures must be used for disease preventive activities, the health promotion action includes not only medical care but also regular health checks in Japan.

As a result, as the aging population growing around the world in 21 century, when all the developed western countries (North American and Europe countries) have to face the more and more higher health expenditure, have to struggle for the long waiting time to health service access, have to figure out the strategies of reducing the high proportion of GDP on health expenditure while improving high quality health service, Japan health care system stands out by its high performance effects. although Japanese health expenditure per capital is only 2474, far lower than most OECD countries, the Japanese have the most long life expectancy in the world, their LE reached 79/86(M/F) in 2005 (WHO Health Report, 2008). In 2000, WHO ranked Japan as the first country of 191 countries in the world for its goal attainments of health promotion and ranked 10<sup>th</sup> in the world for its overall health performance effectiveness (WHO health report, 2000).

Another case is China. Comparing with some high developed country, such as US, Canada, etc, as an undeveloped country, China has obtained a remarkable achievement in health promotion.

For instance, U.S spend \$6697 per capita on health and 16% of GDP in health care in 2005, got 78 years old of LE, nevertheless, China only cost 342\$ per capita and 4.7% GDP in health but got 73yrs (Female 75yrs, male 72yrs,WHO 2006) . Moreover, China has 1.3 huge population and Chinese people live in more complex and more difficult social and political environment and more worse natural environment than American people.

As an extremely undeveloped and needy country during 50s-60s, China had improved its citizen health level very successfully. The life expectancy of Chinese from 39 yrs old(in 1949) increased to 57 years old( in 1957) but the total health expenditure was always lower than 1.08% of total government expenditure and the health expenditure per capital less than 1\$( MHRPC statistic report, 1997). The core strategies which Chinese government used is health promotion strategies in China health system. From 1950 to 1979, Ministry of Health Republic People China(MHRPC) depended on TCM to offer low price primary health care service that over 97% Chinese people can access to handle with the poverty health resource in very difficult economic and social condition, and Chinese people's life expectancy reached male/ female 66.4/69.3 years in 1981(MHRPC statistic report, 2007).

However, when China economy has big developed in 90s, even though Chinese become richer more than before and the health expenditure was increasing faster more than before, the general hospital service environment and equipments have improved greatly than before, the hospital medical quality service were worse than before, and Chinese people health indicators were not obviously improving for over 20 years from 1980 to 2000, even some core health promotion indicators were withdraw obviously because China gave up its HPH management model and

policy by so-called 'health care system reform' which drove the hospitals to go for profit health service marketing and to seek for the economic efficiency. The business marketing culture and value, profit-direction value and principle are replaced of the past public, universal and low service price value in China health care system. Because of the profit driving in hospital management culture, TCM culture and value becomes more and more weaker, the western medicine service value become the unique main stream value in China health care reform. The professional-center medicine model replaces the patients-center value to earn more profit to develop more high level quality hospital service. The past principle and value of patients-center and public accessed principle were destroyed completely because of Chinese government withdrew responsibility from health care system supporting, from their finance investment on health system support. All the Chinese hospitals' leaders have to struggle for earning money directly from patients. In 2000, the Chinese Life Expectance was male/female 69.6/73.3 even per capita total on health expenditure increased to 183\$( WHO statistic report, 2006).

Since 2003. China adjusted its health reform policy, health promotion developing policy is emphasized in China health care system, the primary health service is enforced little by little, the community hospitals are developing quickly in recent several years, the health promotion and health education become the national health promotion policy and health promotion movement become more and more popular and are encouraged in most cities in China. Chinese health indicators improved quite faster than most countries before since 2003. More remarkable achievement, China government invests in health expenditure is lower than most countries, especially far lower than all developed western countries. From 2000 to 2006, even China per capita total expenditure on health increased from 183 to 342( ppp int \$), Chinese people Life expectancy improved from male/female 69.6/73.3 years to 72/75 years(WHO statistic data,2006)

## **2. 4 HPH improves the cooperation between different professions and departments in hospital.**

Kaja Põlliste et al compared the implementation of health-promotion and quality-related activities between HPH and Non-HPH in Estonian, they investigated 54 hospitals top managers, their study result showed that the rate of patients' satisfaction and the rate of staff job satisfaction of HPH were higher than Non-HPH, the result had difference statistic signification. They thought that HPH had much better cooperation with other organization and better implementation of various guidelines (Kaja Põlliste et al, 2007).

Cooperation among different hospitals or among hospital with other organizations, or among different departments, is one of the important value and principle of HPH. A HPH ought to develop close co-operative relationships in different hospital departments, in different wards, in

different professional groups and in different hierarchy professionals to improve the quality of services more efficiently. Moreover, the strategies that HPH adopts should be comprehensive and easily to understand, should base on current quality management system of hospital. For example, the principles of the EFQM model or the TQM models, etc. (Jürgen M. Pelikan, Karl Krajic et al, 2001). Furthermore, because hospitals play a pivotal role in improving health, as a research and teaching institutions, hospitals produce, accumulate, and disseminate a great deal of knowledge that impacts on the local health level and structures. Cooperation with other institutions and professionals can help to achieve the highest possible coordination of care. Therefore, the strategies to improve quality for HPH would be successive and compatible and the influence of HPH on regional health will be widely. Pelikan pointed out that the organizations adopt HPH will become "healthy" and learning organizations that act strategically in their environments (Jürgen M. Pelikan, Karl Krajic et al, 2001).

In a word, as a core set of organizational principles in health system, the theory of HPH provides a comprehensive strategy to develop health care system more effectively, so that the hospital itself can become a healthy and effective institution that thrive in a complex and dynamic environment. Many researches showed that HPH could play an important role for health care development in developing countries and Europe (Jurgen M. Peliken et al, 1998).

### **3. The development of WHOSATHPH**

#### **3.1 The development of WHO HPH theory**

Since the 1986 Ottawa Charter gave the definition of Health Promotion, the HPH concept was proposed also at the same time. Many people thought the role of the health sector must move increasingly towards health promotion. This changed the role of the hospital. As such hospitals moved beyond their responsibilities for providing clinical and curative services, the hospitals changed their focus from the organization within itself to refocus on the total needs of patients as whole and healthy individuals(Groene Oliver, 2004).

Then in 1991 the first Business Meeting of the International Network of HPH in Budapest published the Budapest Declaration. It was the first publication for Health Promoting Hospitals that adopted a comprehensive theory for guiding HPH development. The Budapest Declaration included two parts, the content and purpose of HPH development, and its 17 criteria to fulfill the concept of HPH. After that, in 1997, the Vienna Recommendations was issued. Vienna Recommendations further developed HPH theory based on the Budapest Declaration which defined six fundamental principles and four general strategies for HPH implementation.

#### **3.2 WHO HPH Project Development and HPH Practise**

From 1993 to 1997, twenty hospitals in eleven European countries participated in the European pilot project (WHO, 2005). Since then, an international Network of Health Promoting Hospitals has built up. Up to now, it has steadily expanded to 25 Member States, with 36 national or regional networks and more than 700 partner hospitals taking part in the HPH project (WHO, 2005).

The model of HPH in Europe is some hospitals invested together in a benchmarking project to develop into more HP organizations, then the members from patients, staff, and communities took part in HP initiatives (Jürgen M. Pelikan, 2005). HPH principles are regarded as voluntary activities in Europe which focus on patient's education. Many discussions showed that HPH could play an important role for health care development in developing countries and Europe (Jurgen M. Peliken et al, 1998).

WHO initiated some effective activities to reduce smoking rates, to stop smoking in public places, to control alcohol, to reduce obesity, to build up healthy cities, etc (see table 2).

**Table2 Development of International Network of Health Promoting Hospitals**

Year	Developmental stage	Number of countries	Number of networks	Number of hospitals
1989–1996	Project Health & Hospital,	1	NA	1
	Hospital Rudol, phsstiftung, Vienna			
1993–1997	European Pilot Project of HPH	11	NA	20
1998	Development of national and regional networks	14	19	210
	under the umbrella of the International			
	Network of Health Promoting Hospitals			
1999		16	29	280
2000		19	29	508
2001		22	29	540
2002		22	32	627
2003		24	34	693

Source from Oliver Groene, 2006

Till to the end of 2008, sixteen international annual conferences had been held. The themes that were discussed in these conferences included migrant-friendly hospitals, mental health promotion, health promotion in primary health care, general practice and community pharmacy.

### 3.3 WHO HPH evaluation instruments

#### Europe WHO Self-Assessment Tool for Health Promotion in Hospital (WHOSATHPH)

In 2001, Rootman et al developed 18 core strategies to build up holistic, inter-sectored, equitable, sustainable and multi-strategy value systems in hospital medical services( Rootman et al, 2001). In 2004, Oliver Groene et al (2004) published a self-assessment tool for pilot implementation based on the standards for health promotion in hospital HPH. 34 hospitals in nine European countries took part in a pre-test evaluation, after that Groene updated and published it in 2006 named WHO Self-assessment tool for health promotion in hospital(WHOSATHPH). Today, this instrument has been translated into Chinese (Taiwan), Estonian, German, French, Italian, Slovak and Spanish (Oliver Gröene, 2008). In 2003, Oliver Groene, Svend Juul Jorgensen and Mila Garcia-Barbero developed an International Working Group. WHOSATHPH is a production of WHO European Health Promoting Hospitals Project. See table 3

**Table3 Projects related to patients, staff, organization and community (HPH database)**

Projects	Issue addressed	Number	Projects	Issue addressed	Number
Patient-oriented (314 overall)	Patient satisfaction	127	Staff-oriented  (270 overall)	Staff satisfaction	16
	Psychosocial aspects	84		Inter-professional communication	79
	Nutrition	75		Working environment	74
	Diabetes	62		Psychosocial stress	65
	Tobacco	59		Other	60

This Self-Assessment Tool for HPH was developed in cooperation with international quality organizations and the members of the International Network of Health Promoting Hospitals (Oliver Groene, WHO, 2004). WHOSATHPH includes 40 items which refers to five standards: management policy, patient assessment, patient information and intervention, promoting a healthy workplace, and continuity and cooperation. Each standard has its own set of

sub-standards ((Oliver Groene, WHO 2007). The total standard conception Of WHOSATHPH was showed in figure3.

The first standard of WHOSATHPH is health management policy. As such, health management policy was defined as policy that evaluates promotion as an integral part of the organization's quality management system. A policy for health promotion should be implemented as part of the overall organization's quality improvement system to improve health outcomes, and should be the foundational framework to organize the activities concerning health promotion for patients the their relatives and for the hospital staffs. The second standard is patient assessment which ensures the health professionals respect the patients's right, this standard systematically assesses the needs of health promotion activities, evaluates the quality of the medical service offered to patients, such as the service of treatment and prognosis and patients health education and psychology caring.

**Figure3 The five standards of WHOSATHPH (Groene Oliver, 2008)**

Domain	Description of the domain
1. Management policy	The organizations' commitment to implement patient involvement and health promotion as part of the overall organizations' quality improvement system.
2. Patient assessment	Obligations of health professionals to systematically assess information and health promotion needs in partnership with the patient.
3. Patient information and intervention	Informing patients about planned activities, empowering patients for an active partnership, and facilitating the integration of health promotion activities in patient pathways.
4. Promoting a healthy workplace	Establishing conditions for the development of the hospital as a healthy workplace and environment.
5. Continuity and cooperation	The organization's planned approach to collaborate with other health service providers and other institutions and sectors, including patients' handover.

The third standard refers to patient information and intervention. It aim to evaluate the quantity and quality of information that are provided for patients by the hospital. For example, the significant knoweldge concerning of disease, in each patient pathways, the information of health condition and health promotion interventions should be available for every patient. And the content of information covers the communication, the coordination between patient and professionals, the continu treatment and care, the patients` right and safety, etc. Moreover, the hospital should empower patients to take part in self health promotion activities and to facilitate the integration of health promotion activities for patients. The fourth standard is to develop a

healthy workplace which means the hospital should develop a healthy and safe workplaces, moreover, the hospital should offer the health promotional activities for its staffs. The fifth standard is the collaboration and continuity that the hospitals cooperate with other health services to optimize the integration of health promotion activities in each patient pathways (see figure 3).

To achieve HPH goal effectively, the hospital should perform health promotion value and culture, develop different strategies in every organized level, from the leadership recruitment or the staff maintenance. Therefore, the hospital has to build up a culture and value system of health promotion and set up its organization structure and management to ensure the health promotion be well development. The detailed standard items of WHOSATHPH see table 4.

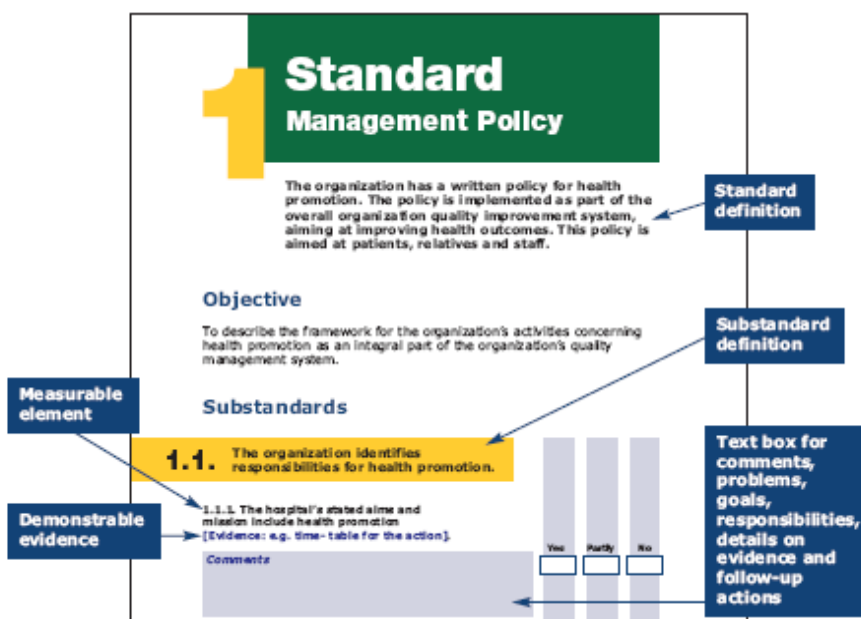
**Table 4. The substandard conception constituted for evaluating HPH in WHOSATHPH**

Domain1.1	The hospital has set up the explicit aim and responsibility for health promotion hospital.
Domain1.2	The hospital arranges the resources for the implementation of health promotion
Domain1.3	For monitoring the quality of health promotion activities, the hospital ensures the smooth procedures of data collection and evaluation
Domain2.1	The hospital take actions to make all patients access to their needs of health promotion
Domain2.2	The patients' need is assessed by medical staff at the first visit, and the assessment is kept adjusting and improving according to the changes of the patients' clinical conditions.
Domain2.3	The patients' need assessment of health promotion can be consistent to information provided by others, and it can reflect sensitively the social and cultural backgrounds of the patients.
Domain 3.1	Based on the patients' need assessment of health promotion, the patients are informed of the health risk factors, and the partnership is built up, the patients agree to participating the health promotion activities.
Domain 3.2	The hospital ensures all patients, employees, and visitors can access easily general scientific knowledge on health risk factors
Domain 4.1	The hospital ensures the developments and implementation of healthy and safe workplace
Domain 4.2	The hospital sets up and implements the comprehensive development strategy of personnel resources, including training and development of employees' skills on health promotion
Domain 4.3	To develop the health awareness of employees
Domain 5.1	The hospital ensures the health promotion services accord with the current health resources supply and regional health policies and plans.

Domain 5.2	The hospital ensures the availability of implementation of health promotion activities; let the patients participate the activities during the clinic visits or after leaving the hospital.
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WHOSATHPH combined with two parts, the first part explains the purpose, the second part is the measured scale and indicators. The five standards has a set of sub-standards and the measured scale tool adopted three degree options for each item, they are “yes”, “partly”, or “no”. All positive answers should offer with correlative documents as proofs, for example, any kind of medical record or note, etc( See figure 4)

Figure 4. The structure of WHO Self-assessment tool for Evaluating HPH



This scale designed could help the hospital managers or researchers to collect quantity data and qualitative information, which will give more valuable information to improve the future performance effect for HPH development. Furthermore, WHOSATHPH also give the form for the project leaders to record their responsibility of performing Health promotion activity (see figure5).



Figure5 The first part of WHO self-Assessment Tool for Evaluating  
**Project leader**

(Takes responsibility to overlook the overall self-assessment process and for the results presented)

<b>Name</b>
<b>Function</b>
<b>Date</b> / /

HPH 

---

Signature

*Members of the steering group*

<b>Name</b>	<b>Department</b>	<b>Title/ Function</b>	<b>Profession/ Discipline</b>

The complementary indicators and its additional self-development indicators that for developing local health promotion hospital indicators (see figure6 and figure7)

Figure 6 The complementary indicators collection for the WHO SATHPH

## **Standard 1 Management Policy**

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### ***Complementary indicators***

- \_\_\_\_\_ % of staff aware of health promotion policy
- \_\_\_\_\_ % of patients aware of standards of health promotion
- \_\_\_\_\_ % budget dedicated to staff HP activities

### ***Additional indicators***

*(local indicators you may want to consider for the action plan)*

In addition, WHOSATHPH also created a form of action plan to execute the HPH standards (see figure7)

**Figure7. The action plan table for WHOSATHPH**

## Standard 1 Management Policy

### Action plan

	Action	Responsible	Timeframe	Expected result
<b>General remarks</b>				
<b>1.1.</b>				
<b>1.2.</b>				
<b>1.3.</b>				
<b>1.4.</b>				
<b>1.5.</b>				
<b>1.6.</b>				

Oliver Groene et al constructed the WHOSATHPH and tested its reliability and validity through 8 counties and 38 hospitals. They adopted a convenient sample ways to assess the reliability and validity. They assessed self-reported compliance with the health promotion standards of European hospitals and analyzed the proportion with the worst (floor) and with the best (ceiling) scores. They analysed the internal consistency through an overall compliance score basing on the self-assessment reports. The ways they assessed the validity of the tool was self-reported compliance with hospital characteristics, for instance, accreditation status, being member of the WHO HPH network, to ask each hospitals rating of the measurable elements in terms of comprehension, applicability and importance. Their results of the reliability of each standard domain ranged from 0.77 to 0.88 (Oliver Groene, 2008). Mean of the overall compliance score was 71.8 (SD 25.0) (with a possible range from 0 to 136). Ceiling and floor effects for standard 4 and 5 only 10.5% and 15.8%, respectively. Chronbach's alpha for the five scales ranged from 0.77 to 0.88. In their research, the overall compliance score of the sampling hospitals that were accredited or were the member of the WHO network was significantly associated with a higher score than non accredited hospitals or non member of WHO HPH network (score 86.9 vs 64.2,  $p=0.012$  and 79.3 vs 51.9,  $p=0.003$ , respectively).

Up to now, though this instrument has been translated into 7 languages, however, there is few comparison researches of HPH which used this instrument to develop HPH. No cross-culture instrument development research for HPH.

### **Canada (Québec)**

In 2007, based upon the Vienna recommendations for HPH, Nicole Dedobbeleer and André-Pierre Contandriopoulos et al developed an evaluation questionnaire for HPH ---referred to as the Québec Principles for Health Promoting HSSC. The Quebec HPH evaluation instrument focused on: (1) the promotion of dignity, equity, solidarity and professional ethics; (2) Recognition of the differences in needs, values and cultures among different groups of the population; (3) quality improvement measures for the well-being of the population (including patients and their relatives, and the staff of the concerned organizations); (4) Protection of the environment; (5) Becoming a learning organization; (6) Focusing on health in a holistic perspective and not only curative; and finally, (7) A focus on the staff who provides the best possible services to the population (including patients and their relatives) to enhance the healing process, contribute to the empowerment of patients, and to establish a social services network in the community.

They investigated 4 HSSCs in Montérégie in Québec by using this assessment questionnaire. Their study results indicated that this Questionnaire helped to implement and monitor HP and preventive activities, helped health service workers to understand the concepts of HPH, and helped the decision makers of the networks to use the HPH concept as a developmental strategy. Furthermore, they went on developing Quebec health promoting networks that shares the concerns of local health centers and long term care facilities within the commitment of hospitals (Nicole Dedobbeleer and André-Pierre Contandriopoulos et al, 2007).

### **The development of China HPH**

Since TCM has the same value and principle with modern HPH, so China HPH development has many special features with western countries.

First of all, the values and culture of China's health system are combined with TCM and western medicine. TCM culture and value has always been the most important part of Chinese culture during the long time history. Moreover, the benefits value of health service is still the basic principle in China society and national health policy which is different with western country.

From 1949 to1979,because of the serious health resource shortage and serious worse health condition as well as the extremely poor economy condition, China government had to adopt the policy of `self-help and work hard` through `barefoot doctor` and public health promotion movement. The barefoot doctors were the people who accepted few months' basic TCM or basic

medicine operation training who could offer the basic primary service for presents in village. The public health promotion movement included self-health protection that every people had to take part in the physical exercise, hygiene environment movement that all people had to clean the surrounding environment, health education movement that all people had to learn the basic health knowledge. During this time, TCM developed very fast and was the important part in national health care system to offer cheap health care service and to resolve the serious health resource shortage. In another hand, China's hospital development model was also influenced by former Soviet Union and partly influenced by western hospital models which were funded by church organizations. All hospitals were forced to belong to the state and all the health services were public and equal access to. In 1956, 100% of China's hospitals became public and nonprofit hospitals. Influenced by China's political movement and social reform movement, the core value and principle of China hospitals development was patients –center , disease prevention and treatment and hospital was the main power to give health education for public.

Since 1985, as the economic reform pushed forward, China's government gradually reduced the finance support in health care system, instead of the public health promotion value, profit-driving become the unique value since 1989 health reform because of the extremely poor finance support from the government. MHRPC had to issue the policy to encourage China hospitals to go for profit to handle with the finance crisis. In 1989, China hospitals were classified profit, non-profit, public, and provider hospitals. From 2003 to 2007, the public hospitals were from 98% to 79.4% , and the public hospitals are named as non-profit hospitals, but only 49.5% non-profit hospitals are managed by government. The private hospitals increase to 3,574 in 2007, 18% of total hospitals in China(MHRPC statistic report, 2008) .

Although only the public hospitals belong to the government and can get part of finance support from the government, the other hospitals have to be managed as a private business that completely follows with marketing rule to earn money directly from patients. Even the public hospitals have to earn at least 60-70% gap of income and expenditure from patients' pockets. However, all the hospital must follow the health policy and rules made by MHRPC, and all hospitals are compelled to be supervised by local health government for their quality of services and for the service safety. Namely, in China, the government only has the complete governal power and right to all hospitals but without the financial support duty.

However, the interesting conflicted fact is even though Chinese government invests 1% or so of its total expenditure on health, even the total health expenditure is always less than 5% (many years even lower than 2% ) of Chinese GDP, China government has never changed the health promotion value in health policy. And TCM is always regarded as an accessible, affordable, safe and effective important tool to handle with China health resource shortage while the hospitals have to go for the profit. Moreover, the health professionals have to endure the very low salary in

heavy workload. Whatever, health promotion is still the core value and guideline in China health care policy, here lists China six basic principles and regulations which must be followed for China hospitals (Ding Hanzhang, 1999):

- a) Insist on the purpose of serving the people (patient-center), public benefits first, take into account of the economic effect. Avoid focusing on pursuing economic efficiency but ignoring the social benefits.
- b) Focus on improving people's health, primary health service prior, gradually meet people's diverse or higher level needs for health service.
- c) Health development must match the national economic conditions, allocation health resources reasonable and focus on improving quality and efficiency. Prior to develop rural health care, emphasis on disease prevention and TCM. Hospital developing should be in corresponding to the local economic and health conditions, adopt the direct classification management, and gradually narrow the gap between regions.
- d) Most hospitals should be state and the collective-oriented, permit some social organizations or individuals to own hospitals.
- e) Strengthen international exchanges and cooperation in health service field; learn the international advanced experience in science and technology and management.
- f) Strengthen health professionals' ethics construction; improve the health professionals' ideological and moral spirit level.

Since 21century, China adjusted health reform policy and took its past health promotion developing policy for general hospital management, enforced the community hospital development and perfected the primary health service, advocated the health promotion and health education. Many Chinese hospital managers have already pull into ISO, TQM, JCI etc modern hospital management and evaluation systems to rebuild their entire hospital's management system.

Since 2003, more and more China cities join the line of developing HPH, Shanghai is the most successful city in China to perform HPH strategy. Shanghai is one of Municipality directly under the Central Government in China. Since August 1999, Shanghai performed a Chronic Disease Self-Management Approach Research Program (CDSMP). The project aimed at developing a management model for chronic disease patients through education, patients' self-management actives. The project developed a successful model which to fit for community to continue controlling chronic diseases, in this model, the hospitals, the community and researchers share the responsibility to manage the chronic disease. Since 2003, Shanghai launched < Three Years

Action Plan to develop Shanghai to be a Healthy City> (Zhongyang Li, Hua Fu, Shanghai Patriotic Public Campaign Committee). The Shanghai Ministry of Health issued a policy that all community hospitals must take part in the health promotion project and offer health promotion activities and service for all residents who live in the community (Shanghai Ministry Health Care, 2007). Furthermore, the health promotion activities and projects, the community hospitals ought to offer the cheap primary medical service, which most refer to TCM. Moreover, the Shanghai government also issued an evaluating standards to supervise the performance of hospital services to ensure the effectiveness and quality of health promotion.

The developing model of Shanghai HPH is the government leading, and it is very different the spontaneous joint model used in Europe. In Europe, HPH is a volunteer choice for the hospital leaders. Not force from the government or the policy support to HPH nor research on its effectiveness evaluation. HPH is regarded a research project for hospital leaders. However, HPH developed model in Shanghai even it is led by the Shanghai Ministry of Health and is forced to adopt in Grade I and Grade II community hospitals. The Grade II or Grade I hospitals have to be evaluated the quality of medical service and the patients' safety according to a hospital service evaluating standard that developed by Shanghai Health Ministry, and the regional health governal department has to monitor the community hospitals according to the standard at least 4 times a year. By means of these measures, Shanghai achieved the best health promotion effect comparison with others cities and provinces in China. In 2007, Shanghai health expenditure per capital ranged from \$90 to \$540, life expectancy was 78.37/83.29( M/F) years, infant mortality/1000 was 3, Maternal Mortality /100000 given birth was 6.68 ( Shanghai Health Ministry, 2008 Shanghai Health Statistic Report).

Since September 2002, the Beijing Health Department performed HPH strategy to develop HPH in Beijing hospitals(Guo Xiu Hua, Tian Xiangyang et al, 2008). A HPH evaluation questionnaire was developed by Guo Xiu Hua et al which was followed by WHOHPH theory and principle in 2002. In this research, they implemented a pilot test in 44 hospitals, then performed to 90% of all Beijing hospitals to become HPH before 2007, 885 inpatients were randomly sampled from 7 hospitals in Beijing. The results showed that the effect of HP between HPH and NON-HPH hospital was not different statistic signification (Guo Xiuhua, 2008). However, the questionnaire was only mentioned in their research article and is not published. Moreover, the content mentioned of that questionnaire in article referred mainly to patients' satisfaction to hospital service, hospital environment, and food, didn't completely reflect conception and principles of HPH. After that, Fang Lieguo et al studied the health promotion effect in community hospitals, found that education could improve the rate of breastfeeding, improve people's health knowledge but not change people's behavior ( Fang Lieguo, et al, 2006). In 2008, Zeng Zhengbin published a summary article to present WHO HPH theory and presented the strategy for Chinese Hospital to develop HPH. Zeng Zhengbin thought that HPH can meet the need of developing new medical model, can help to develop the functions of hospital and improve the competitiveness of a hospital

( Zeng Zhengbin, Han Fengqing, 2008). In additional, Lin Denan et al concluded an effective model for developing a HPH based on the practice. Lin Denan thought a successful model for developing HPH should have policy support basing on healthy system, ensure science management with perfect net, full participation with strengthening training, full procedure education which focus on behavioral intervention, evaluation, supervision, adjustment through effectiveness evaluation, improvement through developing famous brand` (Lin Denan, 2008) .

Onil Bhattacharyya and Farand Lambert, et al, once presented a model of Canada's community health model in China, and they also discussed the effect of different model for community hospitals management in China to develop more equal, accessible models (Onil Bhattacharyya and Farand Lambert, et al, 2003). Their research embraced the health promotion principle and strategy that encourage to build up a cooperation net between different grade hospitals. Today, this community health center model is one of the popular primary health service models in China even China still exists big challenge on developing an effective and equal and just health care system and HPH.

#### **4. The challenges and chances for developing HPH**

Although HPH theory has developed for about 20 years since 1987 Ottawa Chapter published, there is still not comprehensive model for a Healthy City to develop an integrating systematic HPH program (Oliver Groene, 2006). Though hospita plays a central role in current real health care system, it receives very little attention from academics and policymakers (Martin McKee, Judin Heley, 2002). Rresources and financial support for developing HPH are serious limited because of the lacking of initiative or strong leadership support. Moreover, the new culture and value for HPH development has not developed broadly. The HPH activities most focus on patients' education, few researches relate to evidence-based research. The HPH comparison researches are few. A few researches refer to health economies evaluation and cost-effective analysis for HPH. Even though HPH should become an integral part of hospital management, even it is important to develop an instrument of standards and integrated management toward accreditation HPH.

As a country that has one of sixth population of the world, China has over 1.3 billion populations with 56 nationalities who have different culture and values and beliefs. To improve this huge population health level not only help for China society developing but also help to improve global health levels. As an undeveloped country, China had been successful to develop its citizen health by health promotion strategies. However, when China got the economic achievement in 90s, even the national health policy still emphasized non-profit values for all public hospitals, but with only total 4.76% GDP in health expenditures of government, and the government expenditure funded is less than 30% of total hospital costs, China 'non-profit' hospitals have to be scrambling



to earn money to balance the remaining 70% of costs to survive. Today, patients are regarded as consumers in China's healthcare system because all hospitals have to earn money from their medical service. For hospital managers, this means: no patients, no money. Nevertheless, even though municipalities and towns might have little or no financial budgets on health and because local government also has an obligation to supervise and manage hospital services, the government still controls health service price in very low levels to ensure that health services are accessible to the public. Moreover, the expenditure of human resources in hospitals cannot be funded from China government. Consequently, China's health professionals and support staffs have to work in low salaries, and the hospital managers have to struggle to continue to increase profit margins by a variety of means, for instance, selling high price medicine and materials as well as developing other new medical service projects which have not been regulated by government. This worse situation brings many challenges for China hospital to develop HPH.

Most China health professionals have to face over workload but be paid back very poor salary (similar or lower than average city resident income). So even though Chinese per capita health expenditure belongs to the lowest degree in the world, even Chinese people only pay less than \$1 to visit a doctor, because personal out-of-pocket on health expenditure is over 49% and Chinese government only share 18 % health expenditure (WHO health statistic report 2008), so 22% Chinese people thought the medical service fee is too expensive (MHRPH, 2009). Although Chinese government policy always put `the patient center` at the first important policy and forcibly make the hospital to perform public cheap high quality service, however, for lacking 70% finance gap which should be compensated from the government but not, all Chinese hospital leaders have to work for money, have to couple the health professional's salary directly with their service to patient. This marketing management ways not only greatly worsens the relationship between health professionals and patients, causes a vast of vehement conflicts between doctors and patients, it almost thoroughly destroys China original upstanding health moral value system. It not only produces the broad popular professional corruptions, increases the inequity to access health service, but also produces many social problems, such as refuse poor patients, medical causing poverty, waiting for death and refusing medical service, and social revenge criminal, etc. And all these problems that relates to government responsibility deficiencies have to be taken on by China doctors and nurses who have to be worn out with errands all these social conflicts. A last survey report showed that 37% Chinese doctors thought they have to take charge of over load task, 26% medical professionals have experienced violent attack in recent years, 88% medical professionals thought it is necessary to take precautionary measure to keep away patients` query and investigation during working, 10% Chinese people thought the condition and environment of health institutions are worse (MHRPC, 2009).

However, the greatest challenge for China government is not only increase the investment on health system, but also develop the value of equality and universal access value in its political

system and health policies, is to develop complete HPH in its health care system. The last two decades practice experience which China simply copied the west countries hospitals development model, proves that China cannot afford its health expenditure in that professional center ways as a 1.3 billion enormous population undeveloped country. China government ought to face the more and more serious challenges to protect the habitants' health to meet growing health needs under its very conditioned finance budget in such most complex system of society, China should learn from her past successful experience and failure leasson in the health care system performance to seek for high effective resolution strategy. Nevertheless, as an undeveloped country, China hospital system exists many defects therefore China has to learn the successive experiences from Canada etc developed countries to perfect its current health care system to become more universal access and more equal health care system, to improve the weak management ability of hospital leaders. The top decision-makers and policy makers should really implement the value of HPH in its evaluation standards system in hospital management, should improve the live and work conditions for health professionals and protect their proper human right and life security, should improve the capacity of health service delivery in rural areas, strongly promote the development of community health services, and continue improving maternal and child health care service, etc.

As for Western health promotion developing model, western countries need to find more effective and valuable theory and strategy to handle with the new health challenge in 21century, they need to open mind to learn from different culture and value of HPH development. Although Grant thought the decentralized Canadian healthcare system achieves universal access, high quality and moderate costs through implicit and explicit rationing of services (Grant T. S. et al, 2005), however, Canada also struggles for handling with the conflict of between keeping high quality of medical service but decreasing finance budget on health expenditure while meet the growing medical service needs of aging population, Canada has to exhaust to tackle the excessive waiting times and resolve the shortage of health professionals. Raphael D. et al. criticized CIHI over emphasis GDP, over highlighted the role of income, education and social position to population health but lacked of considering the social theory, culture and values that serve to the potential social forces that influence the health of populations (Raphael D. & Bryant T., 2002).

Whatever, as an undeveloped countries and has so many difficult factors to develop health promotion, China government costs so less health expenditure than most countries in the world, especially far lower than all developed western countries, but got more remarkable health achievement, China won the very higher effectiveness of health performance than any other countries. For this reason, China health care system and hospital management model deserve to be research. Even for the international exchange and cooperation of improving knowledge and strategy for evaluation of hospital service, it is very valuable and necessary to develop an

evaluating instrument for culture-cross research and for international comparison. Furthermore, though WHOSATHPH has been translated into French, Chinese (Taiwan), Estonian, German, Italian, Slovak and Spanish. None of them follow the cross-cultural process instrument translation to evaluate the reliability and validity for a translation edition instrument.

## **Methodology**

**There are two main purposes in this research.**

**The first purpose is to develop a Chinese version WHO self-assessment tool for Health Promotion in Hospital(WHOSATHPH) through completely cross-culture approach and procedure, it includes :**

1. Translated the source English edition tool into Chinese;
2. Back translated it into English.
3. Then evaluate the meaning equivalence of back translation English version and original English version.

3 health professionals whose work language is English (1 Native American, 1 evaluation professor, the author of WHOSATHPH) took charge of the meaning equivalence assessment.

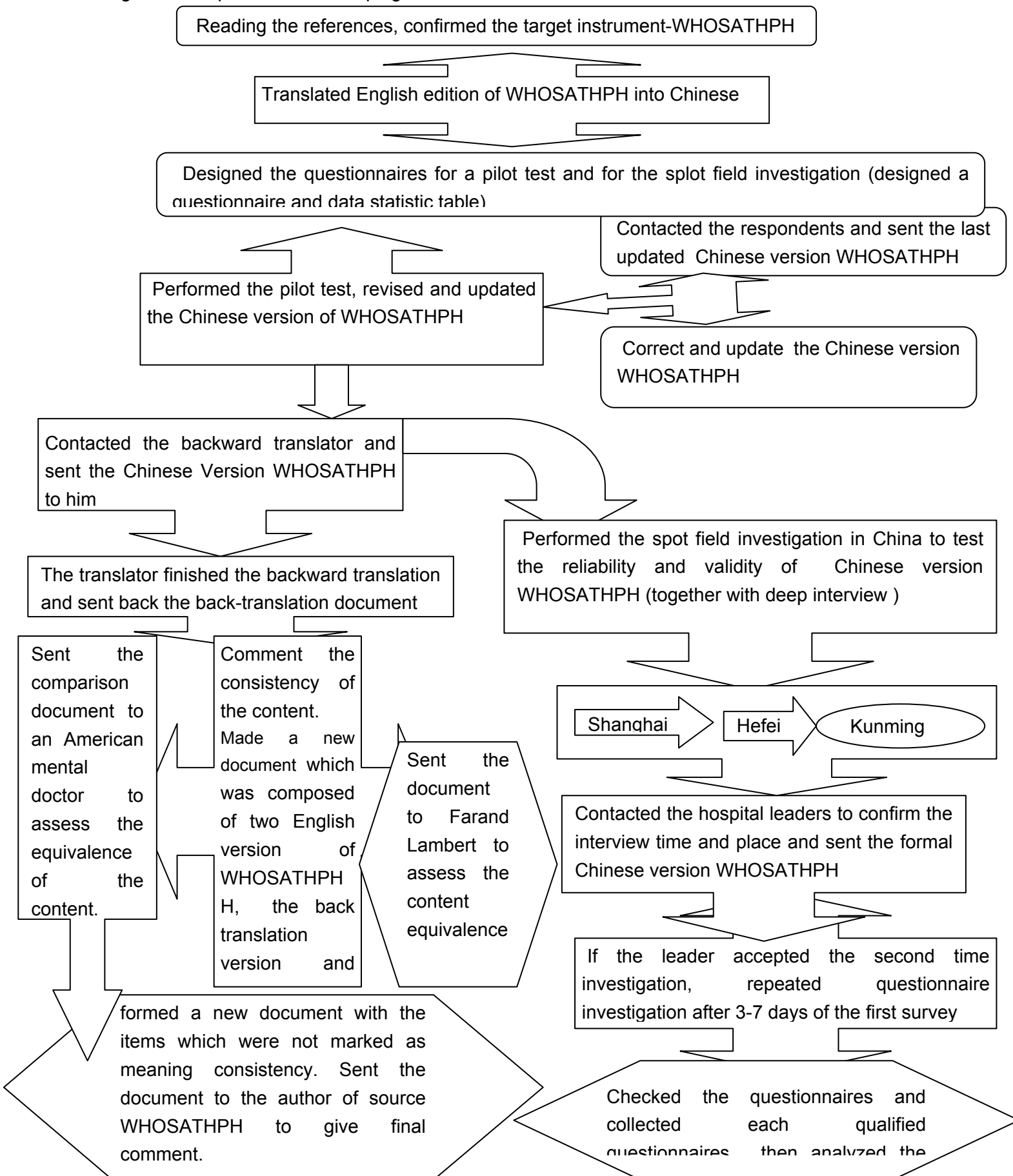
**To test the reliability and validity of this Chinese version WHOSATHPH through a pilot test in Canada (Montréal) and a spot field investigation in China. It include:**

1. 8 Chinese health professionals who worked in China and are working in Montreal were investigated to complete the pilot test.
2. The spot field investigation was performed in three Chinese capital cities, Shanghai, Hefei and Kunming from 5 June to 30 August 2008. Non-probability sample was used to survey 40 hospital leaders who were from 22 China hospitals, and 3 specialists in health management in university (include 1 government officer).
3. All the respondents were voluntary to take part in the first survey and the repeat survey after 3-7 days if they would like to. 35 hospital leaders were given 15-45 minutes interview during they answered the questionnaire.

**The second goal of this research is to provide a primary description and analysis of the current China HPH situation through the investigation result of this Chinese version WHOSATHPH, discuss China current hospital management model and evaluation stands , analysis the value and culture of TCM and its role and influence to China HPH development.** This discussion was based on the publication research materials, government statistic reports, it includes:

1. Theory presentation: present China current hospital management model and its evaluation principles, the value and culture of TCM and its influence and role to China health promotion development;
2. Discuss the successful experience and failure lesson of China health promotion development; Discuss the strong and weakness of China Health Management Strategies

Figure 9 The process of developing Chinese Version of WHOSATHPH



# 1 Translation

## 1.1 Instrument

The source instrument should meet the three main conditions:

The assessment tool can be easily used by hospital leaders, hospital management researchers and policy makers in China.

Can be compatible with the requirements in Chinese culture and value.

The hospitals can get benefit from using the instrument.

The revised WHOSATHPH was published in 2007 (Oliver Gröene, 2007), the last edition of WHOSATHPH was adopted as the source instrument that was translated into Chinese in this research.

The principle and process of translation were followed with the standard procedure developed by WHO, the principle is according to the guides of Methods and Data Analysis for Cross-cultural Research (Fons Van de Vijver, Kwok Leung, 1997). The translation language style used is compatible Chinese official Simple norm style and matches the language custom of Mainland Chinese.

## 1.2 Focus Group( Expert panel )

The expert panel was composed of six people who knew this research project and were able to take part in this research group. The role of the expert panel is to guide or lead the whole study, including create research plan and investigation programme for pilot test and splot field investigation; supervise the study design plan; comment the translation work and backward translation work; support the survey.

Listed the expert panel name of this research as follow:

M.Sc. Zhou Fengqiong ( the principle responsible of this research, Master student of University of Montreal) created the research project plan and investigation programme , translated the instrument, implemented this research project and all investigation,interviewed the target people in pilot test and formal test for the instrument cross-culture validity examination.

Farand Lambert (Associated professor at University of Montreal), supervised this research in whole procedure, guided the method, supported the performance, and commented the quality of back translation work.

Fu Hua (Professor of School of Public Health of Fu Dan University), assisted to supervised the performance of this research, for instance, forward translation and backward translation work, supported the investigation in Shanghai.

Fang Jiqian (Professor of department of health statistic of Public School, Sun Yet-San University) Helped to comment the method of survey design and data statistic analysis in China.

Xu Qian(Professional de GRIS, Université de Montreal) Commented Chinese Vision WHOSATHPH and supported the pilot test.

Luo Li (Ph.D of Department of China Social Health Care Management System of University, director of Department of Hospital Management of Fu Dan University) supported the investigation in Shanghai hospitals, and commented the instrument.

### **1.3 Translator**

The forward translator met these conditions: very familiar with terminologies of the health management, familiar of WHOSATHPH and Chinan health care system and hospital management, bilingual of Chinese and English.

Forward translator was this project researcher.

The back translator met these conditions: bilingual of Chinese and English, don't know the source instrument and never read the source instrument, has the health education context.

Ph. D Li Jian was charged of the back-translation work. He is bilingual of Chinese and English , Mr. Li Jian is a board member of China National expert Panel of Occupational Psychology and Stress. He is one of China national experts of WHO Network in the Psychosocial Work Environment of Developing Countries. He achieved his Ph.D diploma as an international student in Korea, and he was a Post-Doctoral Research Fellow of School of Public Health of Fudan University. He doesn't know the original version of WHOSATHPH.

### **1.4 Forward Translation**

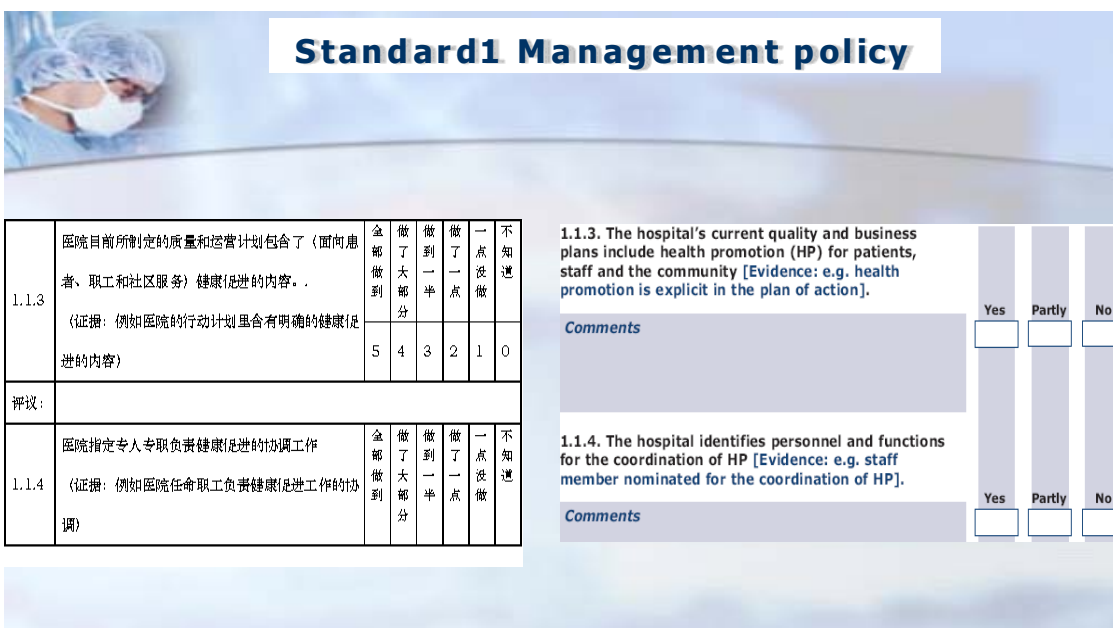
#### **Translation procedure**

Chinese Vision WHOSATHPH tried to keep the construct equivalent with original instrument, namely, the conception of standard, sub-standards and items completely are same with motherboard, and used most of its designed style except the measurement scale of second part (see figure 10).

WHOSATHPH used three class measuring scale that were—yes, partly and no. In this research, in order to precise the measurement, Chinese Vision used five classes and added another option—don't know for people choice . Therefore, there are total six optional choices for measuring each item, “absolutely yes, most, half, less, absolutely no, I don't know”. This change of measurement scale will help to build up measurement unit equivalence within partly and reduce the bias of understanding of partly, meanwhile reduced the description load of each item, make the quantity degree of the data more clearly.



Figure 10. The Chinese Vision WHOSATHPH and the original instrument `s comparison



**Standard1 Management policy**

1.1.3	医院目前所制定的质量和运营计划包含了《面向患者、职工和社区服务》健康促进的内容。 (证据: 例如医院的行动计划显含有明确的健康促进的内容)	全部做到	做了大部分	做到一半	做了一点	一点没做	不知道	1.1.3. The hospital's current quality and business plans include health promotion (HP) for patients, staff and the community [Evidence: e.g. health promotion is explicit in the plan of action].	Yes	Partly	No
评议:								Comments	<input type="text"/>	<input type="text"/>	<input type="text"/>
1.1.4	医院指定专人负责负责健康促进的协调工作 (证据: 例如医院任命职工负责健康促进工作的协调)	全部做到	做了大部分	做到一半	做了一点	一点没做	不知道	1.1.4. The hospital identifies personnel and functions for the coordination of HP [Evidence: e.g. staff member nominated for the coordination of HP].	Yes	Partly	No
								Comments	<input type="text"/>	<input type="text"/>	<input type="text"/>

In addition, the Chinese Vision WHOSATHPH used table style to predigest the self-assessment tool and made it explicit to understand and easy to fill and analysis. The entire Chinese Vision WHOSATHPH see appendix 1.

### 1.5 Principles of Translation

The whole translation work focused on conception and meanings, but not the literal translation; moreover the using vocabularies were compatible to the target people naturally. Namely, Chinese translation version focused on the conceptual equivalent of a word or phrase, not a word-for-word translation.

- Translation was as possible as precise to reflect the definition of the original term. Use clear, concise and simple words to express the standards, items etc phrase. Avoid ambiguous word and long sentences including different subjects.
- Avoid complex uncommon or nonstandard jargon which were difficult to be understood by most target people. For example, complex not official technical terms, colloquialism, idioms or vernacular terms.
- Avoid the words or terms that might be offensive to the target people.

### 1.6 Backward Translation

After confirming the back-translator and getting his acceptance, the Chinese Vision WHOSATHPH was sent to him, at the same time, the researcher talked with the backward translator the demands and standards of the back translation work:

Should not read the original WHOSATHPH during the translation;

The backward translation should respect the same principle of forward translation mentioned above. Therefore, standards of the back translation are the same with the forward translation, and that translation should be focused on conceptual and cultural equivalence but not linguistic equivalence.

The back translation edition of Chinese Vision WHOSATHPH see appendix 2

## 2 Evaluate the Equivalence of Translation

A comparison document was made to assess the equivalence of the content and conception between the backward translation version (English) and the original English version document. The entire document sees Appendix 3.

The equivalence of translation document included two parts, the first part was evaluation scale, the second part was items. See figure 11 and figure 12.

### Figure 11 The equivalence of the content and conception for each item evaluation

#### Comment back translation work for WHO self-assessment Tool

- Comment people:
- Profession:
- Education:
- Contact information:

- Note: compare the two sentences and fill the number into the small frame.

1. completely the same thing
2. almost the same
3. Some
4. almost not
5. completely different

Four options were available for comment each item between back-translation document with source instrument. They are:

Completely the same meaning;  
almost; some(half); almost not;  
completely different meaning.  
Each item of backward translation version and original version was put together respectively in two column (See figure 12).

Figure 12. The comparison document for assessing the content equivalence of WHOSATHPH

**Example:**  
Responsibilities and requirements for self-assessment

<p>1. The responsibilities of self-assessment should be filed. <span style="float: right; border: 1px solid black; padding: 2px;">1</span></p> <p>2. There should be one person (project manager) to take charge of the work. <span style="float: right; border: 1px solid black; padding: 2px;">4</span></p>	<p>1. Responsibilities for the self-assessment should be documented in this section.</p> <p>2. One person has .....</p>
---	---

1. completely the same thing  
 2. almost the same  
 3. Some  
 4. almost not  
 5. completely different

The left side chart is the item of back translation version, the right side chart (green words) is the item of original version. The small chart at the bottom is the scale which If the valuator thought the item is complete the same meaning between right side chart with the left side, then he marked `1` in the small square at the end of the item. If the valuator thought the meaning of item of backward translation was most different with the original version, then he click the 4 almost different, If he thought the item is complete the different meaning, he marked 5, and so on. see figure12.

The 40 items comparison document was sent to Mr. Farand Lambert and Mr. Timothy Kavi who is an American mental doctor. Mr. Timothy Kavi was responsible to assess each item and clicked his choice from the four options by comparing the meanings of each sentences of two editions. Mr. Farand Lambert read all comparison documents but he only picked up the different sentences and pointed out the different meanings sentences. The author Groene Oliver gave the final assessment to all items which marked as some or almost different meaning. This project researcher collected all the items which scores were over 3 (some or almost different meaning) evaluated by Mr. Farand Lambert or by Mr. Kavi. Then these items were reorganized in a new document. This view document that included 12 items ( > 2 ) which were marked as some different(=3) or almost different meaning(=4 or =5) was sent to the author of WHO SATHPH, Mr. Oliver Gröne. Mr. Oliver evaluated the equivalence of the sentences that were marked different conception by Mr. Timothy Kavi and Mr. Farand Lambert.

### 3. Investigation for Reliability Test

Purposive nonprobability sampling methods was used in this research.

Nonprobability sampling is a survey method which includes Convenience Sampling but not uses *random* selection to go on research. It is a common measure in social research that there may be

circumstances where it is not feasible, practical or theoretically sensible to do random sampling (Web Center for Social Research Methods, <http://www.socialresearchmethods.net/kb/samprnon.php>). Non probability sampling is a sample of units where the selected units in the sample have an unknown probability of being selected and where some units of the target population may even have no chance at all of being in the sample (OECD Glossary, <http://stats.oecd.org/glossary/detail.asp?ID=5066>). The nonprobability sampling methods was classified into two broad types: *accidental* or *purposive*.

Non-probability sampling methods can be useful to describe the comments about the sample itself are desired. Moreover, nonprobability sampling method is a quick, inexpensive and convenient research method in applied social research, when it is unfeasible or impractical to conduct probability sampling. Statistics Canada has used non-probability sampling for questionnaire testing and some preliminary studies during the development stage of a survey (Statistics Canada, <http://www.statcan.gc.ca/edu/power-pouvoir/ch13/nonprob/5214898-eng.htm>).

### **3.1 Chinese Vision WHOSATHPH Pilot Test**

#### **3.1.1 Designed Attaching Questionnaires**

When the translation work of WHOSATHPH was finished, an attaching questionnaire was designed for it to use in pilot test and the scene survey to collect the information of target hospitals and target group people`s ( See Appendix 4) .

Equivalence is an intrinsic property of an instrument and the different cultural distance between groups will cause bias (Fons Van de Vijver & Kwok Leung, 1997). Delineated the theoretical boundaries and ensured the explication of assumptions that values, scope and time etc are within the theoretical boundaries, moreover, made the variables across level will improve evaluation (Preskill H, Russ-Eft D, 2005)

The side-instrument including the following information of target hospitals and hospital managers:

- 1) About the hospital: location, size, property, grade, workload (number of outpatients and discharge patients per year, number of professionals, and annual income and expenditure, the time of performing health promoting hospital policy if they had, etc.
- 2) About the hospital leader: Name (for data checking), sex, education, profession, experience time of hospital management;
- 3) About the instrument design and content: easily degree for understanding, its utility, faults, feasibilities, and suggestion
- 4) About the investigation and interview: satisfied degree and suggestion

#### **3.1.2 Purpose of the pilot test**

Revised the forward translation, corrected the wrong expression in translation, ensured the forward translation edition to be easy to understand and have the equivalence conception with original edition.

### **3.1.3 Sample of pilot test**

8 bilingual (Chinese and English) people who had been working in hospitals or health related institutions were invited into this pilot survey. They are all working in Montréal hospitals as researchers or in their clinic as individual practitioners; one is a medicine student at University. Their profession background in China including nurse, West Medical doctors, Chinese Traditional Medicine doctors, two health government officers with public health professional education.

A hypothesis assumed that there is a universe of all possible ideas relevant to health promoting hospital topic who have the similar professional context, but this population were not necessary to be the target population who will used the instrument. In order to get all of the ideas, this research offered a questionnaire for "outlier" or unusual ones, include a broad and diverse range of participants.

#### **Investigating content of pilot test**

Chinese vision Instrument was pre-tested with a small sample of health care users to provide preliminary feedback on: any problem with wording, any problem with the response scale, any problem with the instructions, the relevance of questions and respondents' overall impression of the questionnaire. The pilot test was adjusted base on the last investigation.

The pilot survey included two contents, one is Chinese Vision WHO SATHPH and another is a questionnaire table (see Figure M6) designed for the translation quality of the instrument. The questionnaire include name, sex, profession, education, contact information etc general information of the respondents, the second part include three questions for each facet of an item, the word and the phrase and the role of item.

The questions for testing words understanding as follow:

What do you think this question is ask ing for? Options: It's clear, not clear, it's wrong

Use your words repeat the item. Option: able, unable

The explanation to answer option: logic, illogic

The questions for testing phrases understanding as follow:

Knowledge to a particular term or phrase option: correct, not clear, wrong

Understanding for phrase option: mark the difficult phrase and unappreciated phrase

Giving the suggestion phrase

Questions to each item

Comment to the role of item option: valuable, no use, don't know

The questionnaire see Appendix 3, part of standard 1 see figure13.

The interview questionnaire covered the following questions referring to Chinese WHOSATHPH:

- What do they think about the questions was asking
- Whether they could repeat the question in their own words
- What come to their mind when they hear a particular phrase or term, for example, health promotion, health promotion hospital, health education etc.....
- Explain the reason why they choose their answer.
- Whether or not there are some words they don't understand.
- Whether or not there are some words are not clear to translate the original edition information, what their suggestions or recommended words.
- Whether or not there are some words or expressions are unacceptable or they feel uncomfortable.

The final correction or modification of this Chinese Vision instrument formed the official edition to be sent to every member of expert panel.

**Figure 13: Questionnaire for Chinese Vision WHOSATHPH at interview (part of standard1)**

标准 stand ard	维度 doma in 条目 item code		针对问题 to item						针对词语 to word and phrase					对条目作用意义的评价 comment the value to this item			
			你认为这个问题问的是什么 what do you think about this question		用自己的话复述 repeat by own's words		对选择答案的解释 explanation		对某个特定术语和词组的认识 understanding to a term and phrase			每个词语的理解 understanding to words					
			准确 corre ct	不清楚 no clear	错误 w rong	能 yes	不能 no	符合 逻辑 logic al	不符合 illogi cal	准确 corre ct	不清楚 no clear	错误 w rong	不理解的词 can't understand	不合适的词 not proper	建议用词 sugge sted word	有价值 valuab le	没有 no
—	1	1.1															
		1.2															
		1.3															
		1.4															
	2	2.1															
		2.2															
		2.3															
	3	3.1															
		3.2															

Procedure of investigation for pilot test

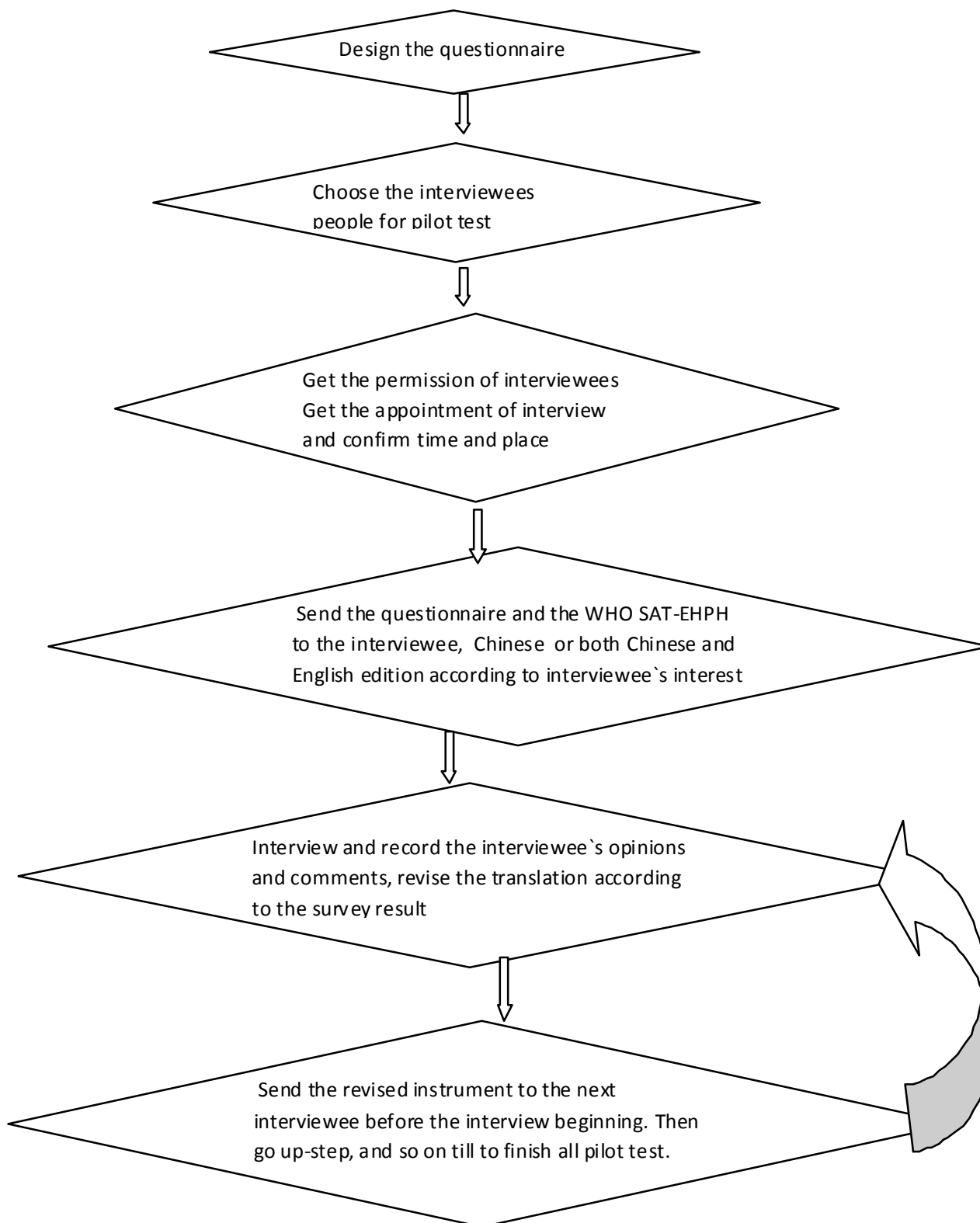
This pilot investigation was performed by this project researcher. The instrument was revised immediately after each interview according to the result of investigation. The revised Chinese WHO SATHPH was sent to the next interviewee before the survey beginning. Three people who were interviewed by telephone, the others accepted face to face interview to accomplish the

questionnaire. The questionnaire and Chinese WHO SATHPH were sent to the target people before the interview beginning. Four people also got the English original document together with Chinese vision. The quality of revision translation was weaving for interview to improve the accurate degree of Chinese translation in conception and expression liquidity and brachylogy. The total procedure, see Figure 14-1.

**Figure14-1. The procedure for performance the pilot test for  
WHOSATHPH**



Figure M7 The technique routine chart of the quasi-experiment



## 3.2 Spot Field Investigation in China Hospitals

### 3.2.1 Nonprobability Sampling

The scene investigation was designed mainly to test the validity and reliability of Chinese Vision WHOSATHPH, and collected the basic rough feedback information to explore the health promoting level of current China hospitals, and to prepare for further research in the future. The survey was adopted nonprobability sample methods which combine with convenience sampling and purposive sampling in this survey (Lei Shi, 1997).

#### Cities Sample

Shanghai, Hefei (capital of Anhui province) and Kunming (capital of Yunnan province) were investigated in this research project. They all belong to most important 35 cities in China who play very important influence to local economy, culture and policy.

China economic development level is roughly classified three types, more developed in east regions, middle level in middle regions and less developed in west regions (National Development and Reform Commission, 2006).

**Shanghai** locates in East region and is the most advanced modern city in China. Shanghai is the largest city in China, is also one of the largest metropolitan areas in the world (Wikipedia website, <http://en.wikipedia.org/wiki/Shanghai>). It has 13.6 million populations (Shanghai Statistic, 2006 Yearbook). It's one of three municipalities administered with province-level status in China, it serves very important role and position in China national economic construction and social development, it accounted for 1 / 8 of total national fiscal revenue and 1 / 4 of total national import and export commodities (China Shanghai official website <http://www.shanghai.gov.cn/shanghai/node2314/node3766/node3796/node18138/index.html>).

**Hefei** is one of the famous Chinese Culture History city locates in middle of China, it is regarded as one of China traditional culture Birthplace, it was a political and culture center in China history. It is a prefecture-level city with about 5 million population and 99.9% are Han nationality. Hefei belongs to middle economy developed level city in China, ranks the second important position in education and as a second culture centers in China just behind Beijing (Wikipedia, <http://en.wikipedia.org/wiki/Hefei> ).

**Kunming** locates in west China, belongs to undeveloped economy region, its inhabitants cover 26 different kinds of ethnics, it is the most minorities inhabitants area in China, stands for China multi-culture (Yunnan Development website <http://www.ynfz.cn/Articleshow.asp?ArticleID=717> and Travel China Guide website <http://www.travelchinaguide.com/cityguides/kunming.htm>).

These three cities come from three different kinds of regions which have different socio-economic developing level and culture value context, reflect a rough general profile of most China cities' general social, economy and culture features.

### **3.2.2 Hospitals sample**

The hospitals selected only those were available to be investigated and the presidents of the hospitals were volunteer to be interviewed. Furthermore, the hospital should come from different grades, function sorts, and they met the necessary conditions to perform health promotion strategy.

China hospitals mixed by grade and non-grade hospitals, each grade hospital was further classified by first, second and third class according to its sickbed amounts and medical technique level. According to these natures of Chinese hospitals, and the feasibility of this investigation, Stratified Sampling was used in this study. General First class hospitals in Grade III, II, I were investigated to test the validity of this instrument.

### **3.2.3 Target people**

The principle leaders of the hospital management board (they came from different professional context), Health management leader in government; Hospital management researcher at university or research institution. People who finished the first survey would be invited to have the second times repeat survey after three or seven days based on their schedule, this investigation was volunteer to join in.

### **3.2.4 The Procedure of Investigation**

After confirming the target people, an invitation letter was sent to the target people to get the appointment of investigation and interview. The invitation letter was mainly to introduce the purpose and value of this research and the conception of health promotion and HPH in this research. It was also including the demands of filling the instrument and the contact information of researcher (see Appendix 4). Then a Chinese Vision WHO SATHPH was sent to the interviewees or respondents several days before the date of investigation in order to help the respondents to know what would be investigated and what he will do in the interview. The operation routine see figure M8.

Survey method combined questionnaire and interview. Interviewee was filling the questionnaire while answering the questions about their comments or understanding to these questionnaires. If the research respondents didn't accept the repeat investigation, the survey was finish. If the repeat survey was accepted, then the interval time was fixed on between three day or within seven days. When the first investigation finished, the researcher got back the instrument and sent

the second instruments to the respondent after three days, and then the respondent repeated the second investigation at the same place.

**Shanghai** The interviewees in Shanghai including: one vice-presidents, one assistant of president and three chief nurses of Grade III hospital; two vice presidents of Grade II hospitals; and four presidents of Grade I hospital; three directors of Department of Hospital Board Management that attached to Fu Dan University or Jiao Tong University; two municipal health government officers; one chief professor and director of Department of Hospital Management of School of Public Health, Fu Dan University.

**Hefei** The survey method combined mail and interviewed. Five people were interviewed while they filled the questionnaire; five people mailed their questionnaires after a short and simple interview.

**Kunming** Group survey combined with interviewed and mail investigation. Five samples of respondents, three hospital leaders who were from the Grade II hospital and two from Grade I hospital were collected together in meetings hall to fill the questionnaire and respond to a structured sequence of questions. At the same time, if respondents were unclear about the meaning of a question they could ask for a clarification. Four hospital leaders from Grade III were interviewed, four hospital leaders finished investigation by mail instrument.

The total performance procedure see figure 14-2.

## **4 Supplement documents and data**

### **References, publication, officials data and statistaic reports**

**Other resource of data:**

WHO statistic data and report;

OECD statistic data and report;

SChina Ministry Health Statistic Report;

Shanghai Ministry Health Statistic Report;

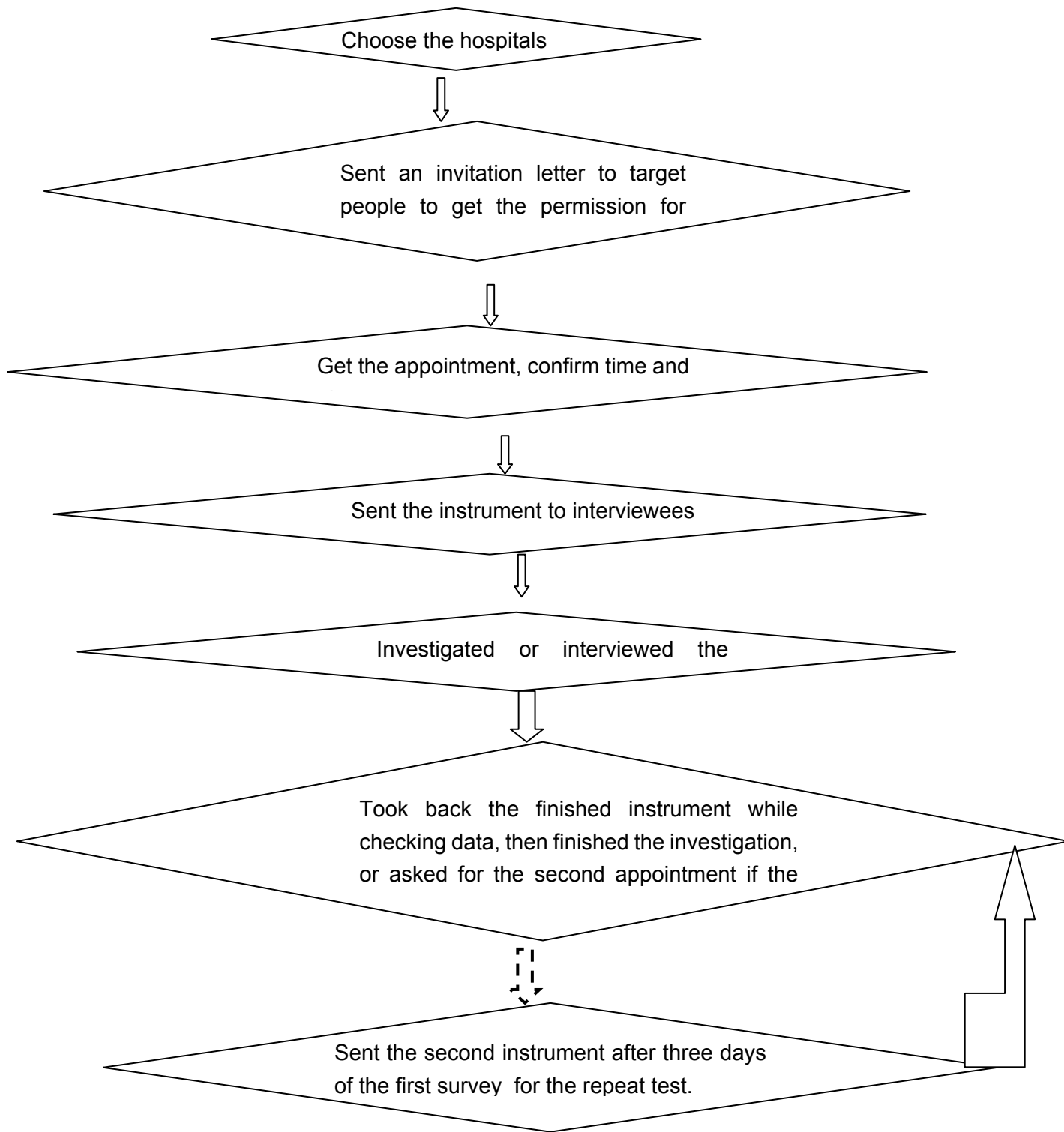
CIHI research reports;

Documents resource;

Professional journal and research thesis;

Publication articles from website;

Figure 14-2. the Technique routine chart of spot field investigation in China Hospitals



## 5. Data Management

In this research, five methods were used to control the bias during the investigation. First is the total interview and scene survey were taken charged by the project researcher. Second, each instrument was checked up when it was sent back or the respondents finished the investigation. Third, used pilot test to test the instruments and got feedback information to prepare for the next step formal investigation. Moreover, the questionnaire was designed for preparing possible problems of target respondents. Fourth, "double-punched" and verified all data when input them. Fifth, used SPSS software to check the data before analysis procedure. Furthermore, the composite statistical method was used to analyze the result and adjust measurement error.

All valid questionnaires were doubly input into the database by using software Microsoft Office Excel 2007. Both manual checking and computer checking were conducted to find discrepancies.

### Check the data

At the beginning of the survey, this project researcher checked the integrity of each questionnaire, asked the respondent to supply answer if there had missed items. In the end of the survey, only one instrument had some missing items after checking the questionnaire, and couldn't contact the respondent to complete the instrument. The missing values in Chinese Vision WHOSATHPH instrument dimensions were managed as follows: General information designed for this instrument and the items of the scale are the obligated information to collect. The other information of the instrument, such as action plan etc is ignored in this investigation. The compensation items and additional items are also as optional choice for the respondents to filled, and they do not belong to this research target data. So these part of data in source instrument were not asked for filling in nor analysis in this research, they are just as one part of content to retain in Chinese Vision WHOSATHPH as for instrument integrity.

The items questions that the respondents could not offer the answers were replaced by `don't know` and give the value `0` in analysis. The other missing information about the hospital income and workload were excluded in Reliability analysis. Total collected 42 questionnaires, two cases respondents were health management researcher in university and government, they only commented the value and the instrument role, their answer were excluded in reliability and validity test analysis. So there were total 40 valid questionnaires were in analysis data. The cases which came from the same hospital were also used for Inter-rater Reliability Analysis. If 50% or more items in one dimension were completed, the mean value of the completed items was used to replace the missing values. If more than 50% of the items were missing, the dimension score was excluded from the statistical analysis. All the questionnaires sent out were returned back, only one case missed 4 items, valid questionnaire rate is 100% in this research.

## 6. Statistical Analysis Methodology

### **SPSS 16.0 and Microsoft Office Excel 2007 was used to manage and analysis the Data. Scoring Of The Chinese WHOSATHPH**

The items and dimensions in Chinese Vision WHOSATHPH were constructed using 6 classic plus one for don't know answer method. The raw score of each of five Chinese vision WHOSATHPH standard dimensions was derived by summing the item scores.

The Chinese Vision WHO SATHPH has five standards domain scores and 13 facet sub-standards and 40 items. They are all positive direction; higher scores show higher health promotion level in hospital.

Items and sub-standards as well as domain count formulation:

Standard1 standards for management policy. Its value is equal to the sum of all items under of it. For example,

Standard1= value Standards.1.1.1 + Standards.1.1.2+Standards.1.1.3+ .....+ Standards.1.3.1 + Standards.1.3.2

And so on for standard2, standard3, standard4 and standard5.

Standard 2: standards for patient assessment.

Standard3: standards for patient information and intervention.

Standard4: standards for improve a health promoting workplace

Standard5: standards for the continuity and cooperation between hospital and others health institutions.

All indicators in WHOSATHPH are positive, more higher score means better health promotion level. If the hospital has completely done or follow the item standard, then get the full score of an item

The item score ( 5= completely done, 4= most, 3= half and half, 2=a little, 1 not at all, 0= I don't know)

Because different standard has different full score, standard 1 has 9 item so has full score 45 point; full score for standard2 (with 7 items) is 35, for standard3(with 6 items) is 30, for standard 4(with 10 items) is 50, for standard 5( with 8 item) is 40.

Each standard is composed of some sub-standards or Domains, and each domain includes some items.

Domain1.1: standards for the first facet of standard 1 management policy.

There were total three domains in standard 1. The domain1.1= sum of total items value under it, and so son for others domain;

Standard 1= Sum of all domains value under it, for example,  
 $standard1=domain+domain2+domain3$

And so on for standard2, standard3, standard4 and standard5. The name of each item and domain; standard see Table5, The name of each item and sub-standards of Chinese WHOSATHPH. Scoring methods for sub- standard (facet) and domains are using excel Microsoft Excel software, the function of Sum.

**Table 5 The domain information as follow:**

Domain1.1	The hospital has set up the explicit aim and responsibility for health promotion hospital.
Domain1.2	The hospital arranges the resources for the implementation of health promotion
Domain1.3	For monitoring the quality of health promotion activities, the hospital ensures the smooth procedures of data collection and evaluation
Domain2.1	The hospital take actions to make all patients satisfied with the needs of health promotion
Domain2.2	The patients' need is assessed by medical staff at the first visit, and the assessment is kept adjusting and improving according to the changes of the patients' clinical conditions.
Domain2.3	The patients' need assessment of health promotion can be consistent to information provided by others, and it can reflect sensitively the social and cultural backgrounds of the patients.
Domain 3.1	Based on the patients' need assessment of health promotion, the patients are informed of the health risk factors, and the partnership is built up, the patients agree to participating the health promotion activities.
Domain 3.2	The hospital ensures all patients, employees, and visitors can access easily general scientific knowledge on health risk factors
Domain 4.1	The hospital ensures the developments and implementation of healthy and safe workplace
Domain 4.2	The hospital sets up and implements the comprehensive development strategy of personnel resources, including training and development of employees' skills on health promotion
Domain 4.3	To develop the health awareness of employees
Domain 5.1	The hospital ensures the health promotion services accord with the current health resources supply and regional health policies and plans.
Domain 5.2	The hospital ensures the availability of implementation of health promotion activities; let the patients participate the activities during the clinic visits or after leaving the hospital.



## **Analysis and Results**

## 1. The result for equivalence of back translation of WHOSATHPH

The equivalence evaluation document only include the standards` part of WHPSATHPH except the parts of action plan, complementary indicators, standard description and objection description, back translation version have high equivalence with original version. Three valuator didn`t mark the difference.

The part of standard and scale has 40 items. Mr. Tim Kavi marked 6 items as almost different(6/40) , Mr. Farand Lambert marked 7 items as different meaning(7/40), but they only have two items got the same evaluation which were regarded as difference by both Mr. Kavi Tim and Mr. Farand Lambert, which were item 2.1(< The hospital take actions to make all patients satisfied with the needs of health promotion> . ) and item 5.1.4 (The hospital draws the written cooperative plan with the partners together to improve the continuity of nursing (evidence: check the standards of hospitalization, and plan of leaving hospital).

However, these items (total 13) which were marked as different meaning by Farand or by Kavi, 12 of them were marked as the almost the same meaning by the author Mr. Groene Oliver except item 2.1. Only 1 item was marked as completely different meaning by the instrument author, Mr. Groene Oliver. This different item is standard 2, item 2.1. The difference caused by the word `satisfy` in back translation version, `satisfy` was regarded as completely different meaning with original version `access the need`. The Chinese version used the word <满足> which means `Match the need`.

In Chinese culture or political propaganda, Chinese word <满足> implicits the satisfaction if a person`s need is matched. So the backtranslator used `satisfy` replaced the word `match the need`, because of Chinese culture and policy demand or political propaganda, especially in health care system. Because the meaning of word `satisfy` is more close to China health policy and moral demand for health workers. So the back translator use the word `satisfy` but not `match` as back translated the word <满足>, The total result of equivalence comment for back translation version of WHOSATHPH see Table6.

**Table 6 The comment result for back translation of Chinese version WHPSATHPH**

	No of items	Kavi Tim	Farand Lambert	Both Tim and Lambert	Groene Oliver
the standard part	40	40	40		13
<2		34(85%)	33(82.5%)	31	12
>=3		6	7	2	1
action>=3		0	0	0	0



Their ages are in 30~50 years old group. Except one 48 years old woman who is a Chinese Traditional medicine doctor didn't think this questionnaire was easy for her, 2 interviewees who are western medicine doctors thought this Chinese questionnaire was easy to understand (see Table6). This instrument was very easy for people who had public health education contest or hds health management context in pilot survey. There were total 15 words and phrases were commented as difficulty. The word `Health promotion` and `health promotion hospital` and `Ambulatory Care Sensitive Conditions` are common difficult words for them, but these three words have had universal accepted Chinese term translation, and become a professional term in health care service management domain, so the Chinese vision translation for these three words following the existed term usage.

The word "organization" is replaced by Chinese translation "hospital" because this word is easy to mix with another Chinese word "human organization" which refers to one part of human man body. The word "business" was replaced by word "management" because "business" is a particular word in Chinese related to trade marketing. The word "alcohol" was replaced by Chinese word "wine" which is a universal name of all kinds of alcohol drink, and Chinese "alcohol" usually means an industry liquid which is not for drink. The word "identifies" is translated in different meanings according to the context, for example, item 1.1.4 was replaced by word "appoint", "identifiable" in item 1.2.1 was replaced by "ensure", the word "identified" in item 1.2.3 was replaced by word "clear and striking" in Chinese translation. And these translation words were approved by all respondents in pilot test.

The item 1.1.2. Minutes of the governing body reaffirm agreement within the past year to participate in the WHO HPH project [Evidence: e.g. date for the decision or for payment of the annual fee] "was kept in Chinese Vision only few China hospitals joined WHO health promoting hospital international net and all the respondents in this research chose 'no'.

### **3. Spot field investigation data in China hospitals**

The spot field investigation data included 3 cities and 22 hospitals which total 41 people had participated in investigation in this research; one is local health government senior officer. Data analysis only included the standard part which the items has scale measurement, the compensation items and action plan were not surveyed nor included in analysis data. Most data were collected by researcher, 7 cases were collected by a professor of Anhui Health Management Faculty of Anhui Medical University.

#### **3.1 General statistic description**

In this scene survey for validity test of instrument, there are total 40 people finished the questionnaire, among of them, 16 cases from Shanghai health organization, 15 cases from

Kunming hospital and 9 cases from Hefei hospitals. Profession ration covered west medicine (17 cases), TCM 2 cases, public health 4 cases, 18 hospital managers had health management education context; one leader came from law field. Total 24 cases thought this instrument was easy to understand, but 16 people thought it is difficult. There were 35 hospital leader answered the acceptance question. 17 hospital leaders and 1 health governor(interview) thought they could accepted this instrument to guide their work but 15 respondents didn't accept it. 3 respondents were not sure. Another ministry officer refused to accept this WHOSATHPH because he thought this instrument's content was very abstract (result see table8). However, all the respondents thought this instrument was value in theory and research.

**Table 8. The general information of the survey hospitals and target people**

Total case	40			West Medicine	16
				TCM	2
city	Shanghai	16	profession	Public Health	4
	Kunming	14		Health Management	17
	Hefei	10		others	1
hospitals	III	9	education	University	23
Grade	II	4		Master	10
	I	9		Doctor	7
total		22		very easy	1
sex	male	24	easy filling	easy	23
	female	16		difficult	16
total		40		very difficult	0
satisfaction			accept this instrument or not	yes	17
to survey	yes	40		maybe	3
	no	0		no	15

There were total 22 hospital 40 people investigated. 3 Health researchers (2 government officers accepted deep interview). In Shanghai, there were 3 Grade III hospitals, and 2 Grade II hospitals, and 4 Grade I hospitals were surveyed, total 16 people filled the instrument and 13 of them finished repeat test investigation, 15 of them accepted the interview.

In Kunming, there were 2 Grade III hospital and I Grade II hospital and 2 Grade I community health centers were investigated, total 15 hospital leaders filled in the instrument and three hospital presidents accepted interview, five of them finished repeat survey by mail.

In Hefei, there were 4 Grade III hospital and 1 Grade II hospital and 3 Grade I community hospitals were investigated. There were total 10 hospital leaders filled in the instrument and three hospital presidents accepted interview and four people finished repeat survey by e-mail. Detail information see table 9.

**Table 9 Information of Chinese Hospitals and interviewees that were investigated**

city	Hospital	grade	sickbeds	Number respondent	Interviewee position
Shanghai	Zhongshan Hospital, first affiliated hospital of Fudan University	3	1700	3	assistant of president
	The sixth Shanghai people civic hospital		1650	2	Director of Hospital Management Research Center
	Jin Shan Hospital		605	1	vice president
	The Eighth Shanghai people civic hospital	2	300	2	assistant of president
	Xuhui Center Hospital		650	1	president
	Xujiahui Community Hospital	1	150	1	president
	Rihui Community Hospital		150	1	president
	Tian Pinjia Community Hospital		150	1	president
	Pudong Community Hospital		50	1	president
	Department of Hospital Management of Fudan University			2	director
	Fudan Hospital Management Board Consult Company			1	director
	Department of Hospital Management of School of Public Health of FuDan University			1	professor and leader board member
	Department of Xuhui Health Administration Division			2	director
Yunnan Kunming	The first affiliated Hospital of Kunming Medical University	3	1500	4	president and assistant and project responsibility
	The second affiliated Hospital of Kunming Medical University		1200	3	president and managers
	Wu Hua people Hospital	2	160	2	presidents
	Wu Hua Fengning community Hospital	1	22	1	director

	Wu Hua community Health service center		0	1	director
Anhui	The first affiliated Hospital of Anhui Medical University		1890	3	president and managers
Hefei	Hefei second Civic people hospital	3	550	1	president
	Hefei First Civic people hospital(The third affiliated Hospital of Anhui Medical University)		1600	1	president
	Anhui provincial Hospital		1400	1	president
	Hefei second Civic people hospital	2	321	1	president
	Shushan administration Division San li an community Health service Center	1	48	1	president
	Shushan District community Health service Center		50	1	president
	Shushan Jingang Town community Health service Center		50	1	president

### 3.2 The general statistic information of Chinese Vision WHOSATHPH

The general statistic analysis for the items, domains, five standards and total score of WHOSATHPH used the description method, result see Table 10, and 11.

**Table 10 The general information of five standards in China hospitals**

	N. of items	Range of Sum of Total items	Rate of Mean	Rate of sum	Median	Mode	Std. Deviation	Mini mum	Maxi mum
Standard1	9	0-45	28.17	62.6%	28	29	7.64	15	45
Standard2	7	0-35	23.85	68.1%	24	22	6.80	6	35
Standard3	6	0-30	21.34	71.1%	21	18	6.08	7	30
Standard4	10	0-50	35.71	71.4%	37	38	8.30	16	50
Standard5	8	0-40	28.95	72.4%	30	25	7.14	12	39

Note: Standard1: Management and policy

Standard2: Patient assessment

Standard3 Patient information and intervention;

Standard4 Healthy workplace

### Standard: continuity and cooperation

From table10, results show that the highest rate of score is Standard 5(community and continuity); the mean is 28.95, 72.4% of full score. Then is standard 4(patient information and intervention), the mean is 35.71(full score is 50), the mode is 38, the score mean is 71.4% of the full score. The lest score field is standard1 (management and policy), the mean is 28.17(full score is 45), mode is 29, the score mean rate of total is 62.6%. These results show that China hospitals are doing well in developing the continue health service and cooperation health service. Moreover, the hospital leader thought they are doing well in developing healthy workplace.

However, results also show that the hospital leaders generally thought hospital management is not strong, their self assessment average score is only 28.7(62.6% of full score).

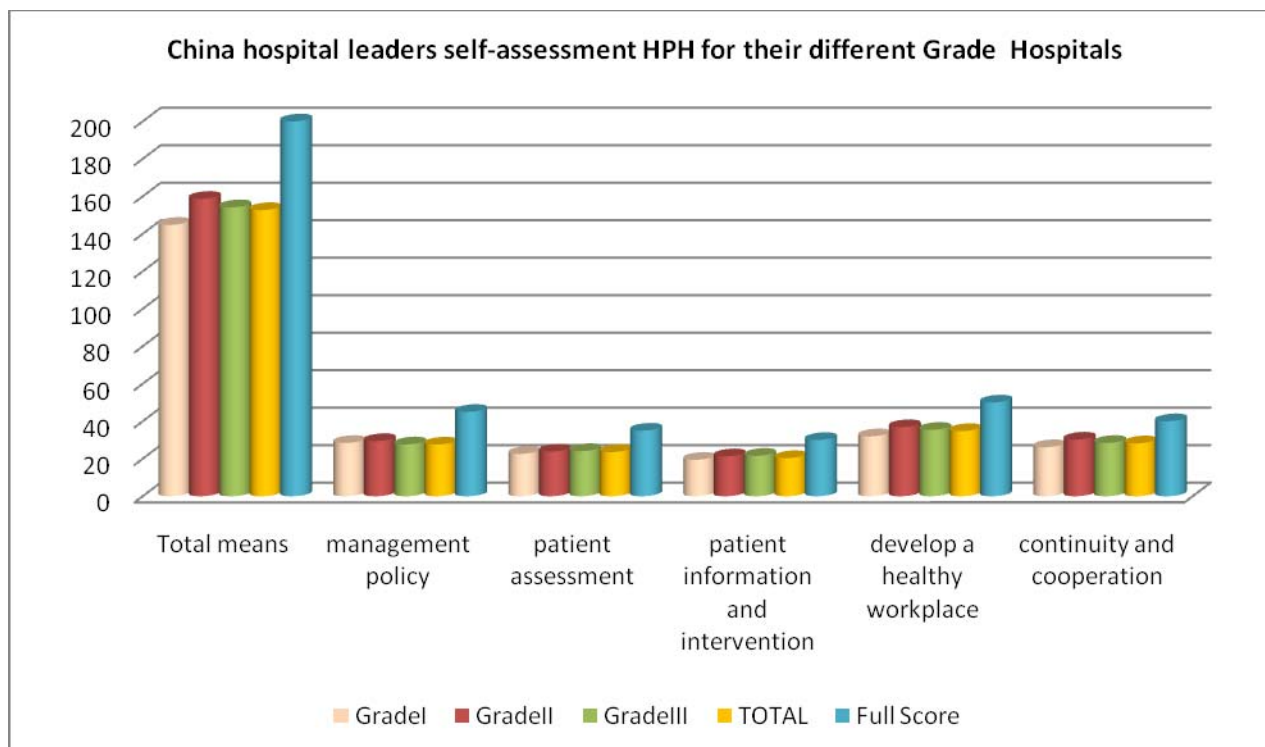
Table 11 Different Grade hospital leaders self-assessment score for HPH

	GradeI		GradeII		GradeIII		Officer and other	TOTAL	
	Mean	SD	Mean	SD	Mean	SD		Mean	SD
Number	11		9		21		2	41	
Total means	144.82	48.2	158.67	32.1	154.19	33.6	148	152.7	37.1
management policy	28.45	8.1	29.44	8.6	27.67	7.9	28	27.6	7.97
patient assessment	22.6	8.8	23.8	6.2	24.1	6.6	38	23.6	7.0
patient information and intervention	19.45	9.7	21.33	5.8	21.57	5.7	16	20.35	6.9
develop a healthy workplace	32	13.6	36.89	7.7	35.43	8.7	36	34.8	10.0
continuity and cooperation	26.18	11.8	30.22	6.1	28.43	7.4	30	28.22	8.4

Table 6 shows that the total 40 hospital leaders respondents, 21 of them work at Grade III hospitals, their total self-assessment score mean is  $154.19 \pm 7.34$ , 9 Grade II hospital leaders self-assessment score mean is  $158.67 \pm 10.7$ , 11 Grade I hospital leaders self-assessment score mean is  $144.82 \pm 14.54$ . Even Grade I hospital (community hospital or community medical service center) total score mean lower than Grade II or III, they don't have statistic signification difference. This result is also the same as in each standard. Five standards don't show difference between different grade hospitals (see Table 11 and figure 16). The blue post is the full score, the pink color post is Grade I hospital score mean, the red post is the Grade II hospital score mean, the green color post is the Grade III hospital score mean.



**Figure 16 shows that there were not big  
differe**



The different grade hospital HP mean don't have big different with full score. The grade hospital means score over than half (according to WHOSATHPH standard, or each health promotion domain). This means the hospital leaders thought they have reached half degree or more for each standard. For example, the standard develop healthy workplace, the full score is 50, and Grad I hospital leader self assessment score mean is 32(64% of total), this means Chinese hospital leaders thought they have developed better healthy workplace. Similar with other standards, Chinese hospital leaders thought they have reached over half degree of continuity and cooperation, also for patient information and intervention standard. But they thought their work in hospital management and policy, in patients sharing the assessment work in develop HPH was so-so.

Table12 show more detailed information for Chinese hospital in this research. The highest score means is domain 4.1(The hospital ensures to develop and implement healthy and safe workplace). The mean is 8.73 of full score 10; rate of total full score is 87.3%. Then is the domain 2.1(The hospital take actions to meet all patients' needs of health promotion), score mean is 11.24% of full score, rate of total is 74.9%, and domain 1.2(The hospital arranges the resources for the implementation of health promotion). The score mean is 10.98 of full score 15; rate of total is 73.2%. The lowest score mean rate is domain 1.3, (For monitoring the quality of health

promotion activities, the hospital ensures the smooth procedures of data collection and evaluation). Its mean is 5.15, 51.5% of full score.

Table 12 The General detail Information of health promotion in Chinese Hospitals

	N	Range of of Total items	Sum Mean	Mean rate%	Media n	Mod e	Std. Deviation	Mini mum	Maxi mum
domain1.1	40	0-20	12.05	60.3	12	12	3.46	5	20
domain1.2	40	0-15	10.98	73.2	11	11	2.64	5	15
domain1.3	40	0-10	5.15	51.5	5	3	3.11	0	10
domain2.1	40	0-15	11.24	74.9	12	12	2.44	6	15
domain2.2	40	0-10	5.63	56.3	6	6	3.16	0	10
domain2.3	40	0-10	6.98	69.8	8	10	2.96	0	10
domain3.1	40	0-15	10.83	72.2	11	14	3.63	0	15
domain3.2	40	0-15	10.51	70.1	10	15	3.34	4	15
domain4.1	40	0-10	8.73	87.3	9	10	1.83	0	10
domain4.2	40	0-25	17.20	68.8	19	19	5.39	4	25
domain4.3	40	0-15	9.78	65.2	10	9	3.38	2	15
domain5.1	40	0-20	14.51	72.6	16	20	5.26	0	20
domain5.2	40	0-20	14.44	72.2	15	15	3.31	7	20
		200							198.
TOTAL	40		138.02		140	98	30.38	64.0	0

From table 12, the results show that the hospital leaders marked their hospital health promotion in quite higher level. There are 13 means of all the standard domains were over 50% of full score, only 2 domains (domain 1.3 evaluating the level of monitoring the medical service quality and domain 2.2 evaluated patients` HP need at the first visit) got the lowest score mean, less than 60% of full score. Their means were 5.15(full score 10) and 5.63(full score 10). The mean of 7 standard domains were over 70% of full score, the highest score mean is domain4.1, 8.73(full score 10), it measured the hospital development and implementation of healthy and safe workplace. Then is the domain 2.1, the score mean is 11.24(full score 15), it measured the hospital take actions to make all patients access to all their needs of health promotion. The domains 1.2 was also given high score mean 10.98(full score 15), it shows that the hospital leaders thought that their hospital allocate the resources for the implementation of health promotion. Table 13 displays the evaluation score character for different grade hospitals in three cities.

The result of this investigation shows that the total score of HPH, Kunming hospitals` score mean is the highest, 145.33, Shanghai got the lowest, the mean is 136.83. Shanghai hospital leaders

give the lowest assessment to their health promotion activity than other two cities in all three different grade hospitals.

**Table 13. The evaluation for HPH of different Grade hospitals in three cities**

	Total			Grade1			Grade2			Grade3		
	shangh ai	Hefei	Kunmi ng	shan ghai	Hefei	Kunmin g	shangha i	Hefei	Kun ming	shang hai	Hefe i	Kunm ing
N	12	10	13	3	3	2	3	2	3	6	5	8
Total means	136.83	148.2	168.8	145.3	132.3	168.5	143.33	156.5	165.3	129.3	148.2	170.1
management policy	22.67	29.4	33.92	25	29.7	34.5	23.33	29	36	21.17	29.4	33
patient assessment	34.33	26.2	45.23	38.33	21.7	47	38	28	40	30.5	26.2	46.8
patient information and intervention	18.83	23.8	23.31	20.67	18.7	24.5	18.33	26	22	18.17	23.8	23.5
developa healthy workplace	33.42	37.2	38	32.33	33.7	38	33.33	37.5	39.33	34	37.2	37.5
continuity and cooperation	27.58	31.6	28.31	29	28.7	24.5	30.33	36	28	25.58	31.6	29.4

There were total 13 Kunming hospital leaders from different grade hospital who filled the questionnaire and WHOSATHPH, they all gave quite higher score than Shanghai and Hefei hospital leaders (see table 13).

Kunming Grade I, II and III hospital leaders, they all gave high scores to health promotion in their hospital. There were 2 Grade I hospital leaders took part in the survey, the score mean of HPH given was 168.5, 3 hospital leaders came from Grade II hospitals given the score mean was 165.33, 8 Grade III hospital leaders gave the evaluation score to their hospital was 170.13. The

full score for HPH was 200. There were total 12 Shanghai hospital leaders joined the survey; the generally assessed to HPH are the lowest in every Grade hospital among these three cities. For example, the total score mean for Grade III hospital, 6 Shanghai Grade III hospital leaders estimated the HPH score mean is 129.33, 5 Hefei Grade III hospital leader estimated score mean is 148.2, 8 Kunming Grade III hospital leaders estimated score mean is 170.13. As for the substandard (domain), the standard of management policy domain, patients` assessment, every grade Kunming hospital leaders gave more higher score than Shanghai and Hefei hospital leaders for their hospitals` health promotion.

The score mean are quite different: for the standard of patient information and intervention domain and development healthy workplace, Kunming hospital leaders still gave the highest score mean, higher than Shanghai and Hefei hospital leaders. But their score mean are not statistic signification different. However, for the continuity and cooperation standard, Hefei hospital leaders gave the highest score, higher than Shanghai and Kunming hospital leaders (see table13).

There were 17 hospital leaders accept to use WHOSATHPH, 3 hospital leaders were not sure to use WHOSATHPH in their work and 15 hospital leader refused to use WHOSATHPH in their work. The reasons that they refused to use WHOSATHPH were the same in different cities and different grade hospital, they were: no government finance budget support, no demand by the government and the instrument was too abstract, it was difficult to follow the standards for Chinese hospital (see table 14).

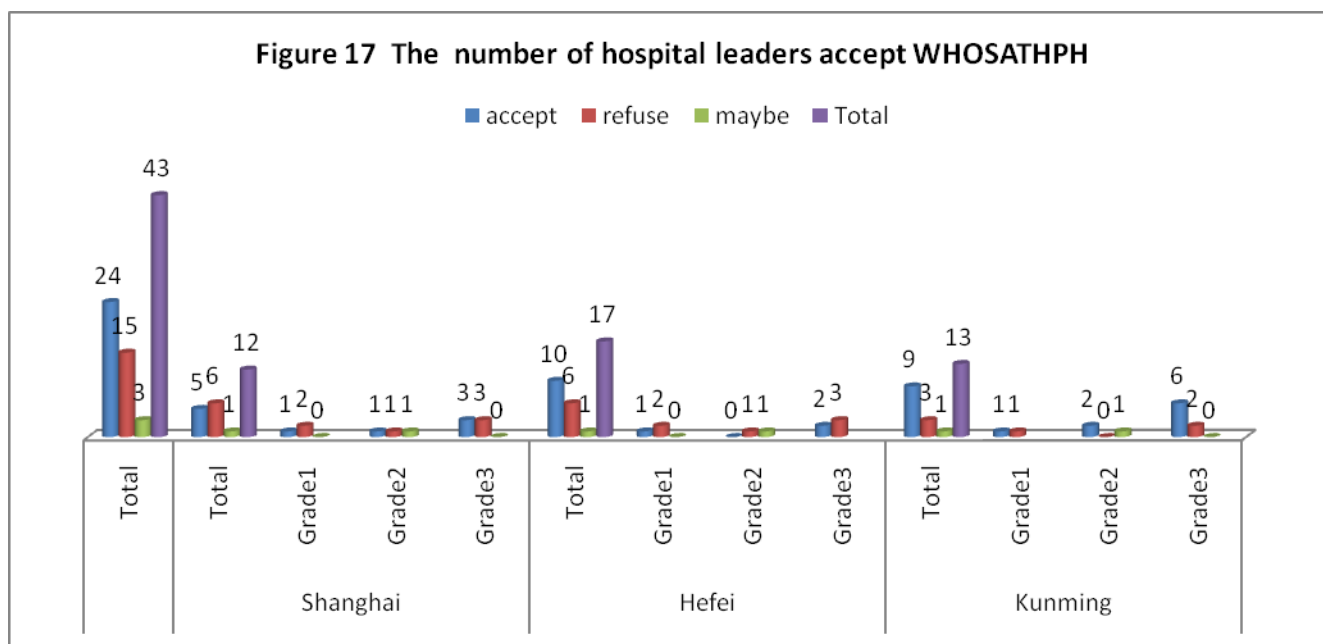
**Table 14 The acceptance of WHOSATHPH by the Chinese hospital leaders in three cities**

		accept		refuse		maybe		Total
		N	Mean	N	Mean	N	Mean	n
	Total	17		15		3		35
Shanghai	Total	5		6		1		12
	Grade1	1	170	2	133	0		3
	Grade2	1	191	1	115	1	124	
	Grade3	3	137	3	121.33			
Hefei	Total	3	148.2	6		1		10
	Grade1	1	183	2	107	0		
	Grade2	0		1	142	1	171	
	Grade3	2	166.5	3	136			
Kunming	Total	9		3		1		13
	Grade1	1	144	1	193			
	Grade2	2	182.5	0		1	131	

Grade3	6	180.83	2	138	0
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Only 35 hospital leaders answered the acceptance question. 5 leaders didn't answer this question, and one Shanghai ministry governor thought this instrument is valuable, will accept this instrument. Another Shanghai governor and two hospital management researchers thought this instrument was too abstract to use for evaluating hospitals' health promotion degree effective even HPH topic deserve research. Table 14 result shows that the hospital leaders who accepted Chinese version WHOSATHPH generally gave higher health promotion evaluation score than those hospital leaders who refused to accept this instrument.

However, all hospital leaders who accepted the interview investigation of WHOSATHPH thought that the WHOSATHPH is valuable to research because it helps the leaders to improve hospital management even they refused this instrument. Among the three cities total 42 respondents, there were 12 Shanghai hospital leaders and 5 of them accept this instrument, 1 maybe used this instrument and 6 refused to use this instrument; there were 10 Hefei hospital leaders answered the acceptance question, 3 of them accepted WHOSATHPH and 6 refused and 1 maybe accept, there were 13 Kunming hospital leaders received interview and answered the acceptance question, 9 of them accepted this instrument and 1 maybe accept and 3 of them refused to use WHOSATHPH (see table 14 and figure17).



The figure 17 shows how many hospital leaders will accept WHOSATHPH in their work. The purple post is the total number of respondents in this interview survey, or the total number

interview leaders in each city. The blue color I post shows the number of the hospital leader who will accept WHOSATHPH and the red color post shows the refuters` number, the green color post show the hospital leaders were not sure whether or not to use WHOSATHPH. If they have finance budget or government order to force them use this instrument, they will use it.

## 4. Validity and Reliability Analysis

### 4.1 Reliability

The Chinese vision WHOSATHPH questionnaire was evaluated by reliability and validity. Split-half reliability was computed by correlating the scores of split at the middle of total each dimension of Chinese vision WHOSATHPH. Test-retest reliability was assessed by the differences between test and retest scores using a paired-sample t test. It was further assessed by intra-class correlation coefficient (ICC). A questionnaire with ICC value larger than 0.7 was usually considered satisfactory (WHOQOL100 user manual, 1998). Internal consistency of the Chinese vision WHOSATHPH items was assessed by Cronbach's coefficient. A Cronbach's  $\alpha$  value of 0.7 or higher was generally considered to be sufficient to demonstrate internal consistency (WHOQOL user manual, 1998). Construction validity was assessed by correlation analysis and factor analysis using principal component analysis and varimax rotation. Factor loads larger than 0.60 within a particular dimension were selected to support its factor construction. The cumulative variance proportion was used to indicate the contributions of the factors (Fang Jiqian, 2005).

#### 4.1.1 Internal consistency

The extent that each sub-standard forms a reliable scale usually is assessed by Cronbach's alpha. There were total 40 items and 13 domains and 5 standards in Chinese Vision WHOSATHPH, the general Cronbach's Alpha for total items of this instrument is 0.938, Cronbach's alpha values in domains level are 0.896. Table 15 shows Cronbach's Alpha of each Standard. Split Cronbach's alpha values are showed in Table 17

Table 15 The internal consistency Test of Chinese Vision WHOSATHPH

Standard	Cronbach's Alpha	Number of item
Management and policy	0.793	9
Patient's assessment	0.819	7
Patient information and intervention	0.807	6
Healthy workplace	0.785	10
Continuity and cooperation	0.755	8
total	0.937	40

From table 15, although this Chinese version WHOSATHPH has high Cronbach's Alpha, the domain Cronbach's Alpha is less than the total Cronbach's Alpha, indicates that the Cronbach's Alpha coefficient may be also influenced by the number of the items of the instrument.

Table 16 shows that the correlation in Split-half models analysis forms is 0.86, Guttman split-half reliability is 0.954. Spearman-Brown reliability equal and unequal length coefficient alpha is 0.954.

**Table 16. Inter-standard Correlation Matrix for standards of Chinese Vision WHOSATHPH**

TOTAL	standard1	Standard2	standard3	standard4	Standard5
TOTAL	1				
Management and policy	0.78	1			
Patient's assessment	0.86	0.59	1		
Patient information and intervention	0.93	0.63	0.83	1	
Healthy workplace	0.87	0.64	0.6	0.79	1
Continuity and cooperation	0.8	0.39	0.69	0.73	0.61

**Table17 Reliability Statistics Split Cronbach's alpha**

Cronbach's Alpha	Part 1	Value	.889
		N of Items	20.000 <sup>a</sup>
	Part 2	Value	.870
		N of Items	20.000 <sup>b</sup>
		Total N of Items	40.000
Correlation Between Forms			.912
Spearman-Brown Coefficient	Equal Length		.954
	Unequal Length		.954
Guttman Split-Half Coefficient			.954

Split total items into two groups according to its ID number, one is odd and another group is even. See following code:

Group even-a. The items are: Standards.1.1.1, Standards.1.1.3, Standards.1.2.1, Standards.1.2.3, Standards.1.3.1, Standards.2.1.1, Standards.2.1.3, Standards.2.2.1, Standards.2.3.1, Standards.3.1.1, Standards.3.1.3, Standards.3.2.1, Standards.3.2.3, Standards.4.1.1, Standards.4.2.1, Standards.4.2.3, Standards.4.2.5, Standards.4.3.1, Standards.4.3.3, Standards.5.1.1.

Group b-odd. The items are: Standards.5.1.3, Standards.5.2.1, Standards.5.2.3, Standards.1.1.2, Standards.1.1.4, Standards.1.2.2, Standards.1.3.2, Standards.2.1.2, Standards.2.2.2, Standards.2.3.2, Standards.3.1.2, Standards.3.2.2, Standards.4.1.2, Standards.4.2.2, Standards.4.2.4, Standards.4.3.2, Standards.5.1.2, Standards.5.1.4, Standards.5.2.2, Standards.5.2.4.

Table 18 The code explanation for analysis the reliability of Chinese Vision WHOSATHPH

Standard No	Domain No.	Item No.	Standard Description
1	Standard1 :Management policy		
	1.1	The hospital has set up the explicit aim and responsibility for health promotion hospital.	
		1.1.1	The hospital has proposed the aim and mission of health promotion. (evidence: time-table for the activities of health promotion)
		1.1.2	In the past year, the hospital restated the participation of WHO project of health promotion and signed the agreement. It has been recorded at the hospital management meetings. (evidence: date and annual fees to participate the WHO project of health promotion)
		1.1.3	The current quality and management plan of the hospital include the contents of health promotion (to patients, employees, and community services).
		1.1.4	The hospital assigns somebody in charge of the coordination of health promotion.
	1.2	The hospital arranges the resources for the implementation of health promotion	
		1.2.1	The hospital makes a special budget and materials to ensure the implementation of health promotion services.
		1.2.2	All clinical departments can provide the operational guidelines or pathways with regard to health promotion.
		1.2.3	The easy recognized structures and facilities (including resources, spaces, equipments) for health promotion have been built up by the hospital.
1.3	For monitoring the quality of health promotion activities, the hospital ensures the smooth procedures of data collection and evaluation.		



	1.3.1	The hospital collects the data during the intervention period of health promotion, and employees can use the data to evaluate the quality of health promotion.
	1.3.2	The hospital has set up the quality assessment procedure of health promotion activities.
<b>Standard2 Patient assessment</b>		
2. 1	The hospital take actions to meet all patients` needs of health promotion.	
2.1.1	The hospital provides the patients with the following guideline: health education on smoking, alcohol drinking, nutrition, and psycho-social-economic status.	
2.1.2	The guidelines / measures have been revised in the past year by the hospital.	
2.1.3	The hospital provides some specific group of patients (for example, asthma, diabetes, COPD, surgery, rehabilitation) with guidelines how to identify the needs of health promotion.	
2.2	The patients` need is assessed by medical staff at the first visit, and the assessment is kept adjusting and improving according to the changes of the patients` clinical conditions.	
2.2.1	The assessment of health promotion is placed in the patients` medical record when hospitalization.	
2.2.2	When the patients leave the hospital or the intervention is over, the hospital provides the patients with operational guideline or procedures of re-assessing the need of health promotion	
2.3	The patients` need assessment of health promotion can be consistent to information provided by others, and it can reflect sensitively the social and cultural backgrounds of the patients.	
2.3.1	There are assessment comments or other relevant information sources from the referring physicians in the patients` medical record.	
2.3.2	The patients` social and cultural background regarded as appropriate medical documents.	
<b>standard3 Patient information and intervention</b>		
3.1	Based on the patients` need assessment of health promotion, the patients are informed of the health risk factors, and the partnership is built up, the patients agree to participate the health promotion activities.	
3.1.1	The information to the patients is recorded in the medical record	
3.1.2	Health promotion activities and expected results are recorded in the patients` medical record.	

	3.1.3	The patients' satisfaction assessment is measured by the hospital, and results are integrated to the quality management system.
3.2	The hospital ensures all patients, employees, and visitors can access easily general scientific knowledge on health risk factors	
	3.2.1	The hospital provides the general scientific knowledge on health
	3.2.2	The hospital provides the detailed information on high incidence / high risk diseases
	3.2.3	The hospital provides the patients association or similar organizations with service information.
<b>Standard4 Promoting a healthy workplace</b>		
4.1	The hospital ensures the developments and implementation of healthy and safe workplace	
	4.1.1	The working environment accords with the national and regional standards and regulations
	4.1.2	The employees obey the operational standards and requirements of safety and health. All risk factors in the workplace are clearly indentified.
4.2	The hospital sets up and implements the comprehensive development strategy of personnel resources, including training and development of employees' skills on health promotion	
	4.2.1	The training to the new employee, including the introduction of health promotion policy in the hospital
	4.2.2	All new employees know the health promotion policy in the hospital
	4.2.3	The hospital has the performance evaluation system and career continuous education system with regard to health promotion
	4.2.4	The multi-disciplinary group develops the practical guidelines and operational procedures of clinical work
	4.2.5	The employees take part in the hospital decision-making, audit, and reviewing evaluation
4.3	The hospital ensures the efficient actions to develop the health awareness of employees	
	4.3.1	The hospital builds relevant policies to encourage the employees to know health conceptions
	4.3.2	Offering smoking cessation program
	4.3.3	Annual employee survey, for assessment of personal behaviour, knowledge of supportive services and policies, information exchange in seminars on health promotion

Standard 5 Continuity and cooperation		
5.1	The hospital ensures the health promotion services accord with the current health resources supply and regional health policies and plans.	
	5.1.1	The hospital management considers the regional health policies and plans.
	5.1.2	The hospital management can provide the list of the hospital's partners, health and social welfare organizations
	5.1.3	(the cooperation among departments within hospitals, and cooperation between hospital and other organizations) is based on the implementation of the regional health plans.
	5.1.4	The hospital draws the written cooperative plan with the partners together to improve the continuity of nursing
5.2	The hospital ensures the availability of implementation of health promotion activities; let the patients participate the activities during the clinic visits or after leaving the hospital.	
	5.2.1	The patients (and relatives, if applicable) can get the understand sequent guidelines during the clinic consultation, referring, or leaving hospital
	5.2.2	There is a concerted procedure between hospitals, about information exchange regarding the patients
	5.2.3	The referring hospital gives the written summary to the receiving hospital in time, the summary includes the patient's conditions, health needs, interventions
	5.2.4	If proper, the rehabilitation plan should be recorded in the patients' medical record, addressing the role of the hospital and the partners.

Internal consistency of Chinese Vision WHOSATHPH detail information of items show in table 19.

**Table19 WHOSATHPH Item Internal consistency**

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Item.1.1.1	134.59	873.999	.669	.934
Item.1.1.2	137.17	905.195	.187	.938
Item.1.1.3	134.15	893.978	.450	.936
Item.1.1.4	134.22	880.526	.403	.936
Item.1.2.1	134.51	896.656	.281	.937
Item.1.2.2	134.46	891.705	.443	.936
Item.1.2.3	134.20	901.211	.311	.937
Item.1.3.1	135.44	867.752	.617	.934
Item.1.3.2	135.51	854.256	.622	.934
Item.2.1.1	133.93	891.370	.618	.935
Item.2.1.2	134.83	892.945	.357	.937
Item.2.1.3	134.15	898.078	.456	.936
Item.2.2.1	135.29	859.562	.627	.934
Item.2.2.2	135.17	860.245	.605	.934
Item.2.3.1	134.34	865.730	.548	.935
Item.2.3.2	134.78	852.376	.747	.933
Item.3.1.1	134.12	859.360	.751	.933
Item.3.1.2	134.88	864.160	.669	.934
Item.3.1.3	134.32	870.402	.600	.935
Item.3.2.1	133.66	894.630	.538	.935
Item.3.2.2	134.22	874.776	.699	.934
Item.3.2.3	135.76	840.889	.656	.934
Item.4.1.1	133.71	934.812	-.187	.940
Item.4.1.2	133.66	920.780	.029	.938
Item.4.2.1	134.40	878.699	.476	.936
Item.4.2.2	135.29	857.162	.680	.934
Item.4.2.3	134.71	871.562	.501	.935
Item.4.2.4	134.68	869.022	.596	.935
Item.4.2.5	133.95	878.898	.666	.934
Item.4.3.1	134.10	881.440	.705	.934

Item.4.3.2	134.49	867.306	.585	.935
Item.4.3.3	135.78	851.626	.717	.933
Item.5.1.1	134.44	865.402	.582	.935
Item.5.1.2	134.34	875.880	.448	.936
Item.5.1.3	134.10	870.890	.628	.934
Item.5.1.4	134.80	874.711	.432	.936
Item.5.2.1	134.02	905.274	.269	.937
Item.5.2.2	135.15	875.978	.463	.936
Item.5.2.3	133.66	904.330	.315	.937
Item.5.2.4	134.93	883.920	.399	.936

From the columns of Cronbach's Alpha if Item Deleted in Table12 all over than 0.93. The results show that the correlation between the respective item and the total sum score (without the respective item) most are between 0.4 to 0.8, shows most items are correlation. The internal consistency of the scale (coefficient *alpha*) if the respective item would be deleted are all quite high, all is over than 0.9. But item standard 1.1.2, 1.2.1, 1.2.3, 2.1.2, 4.1.1, 4.1.2, 5.2.1, 5.2.3, 5.2.4 has less relationship with total sum score; they are not consistent with the rest of the scale.

#### 4.1.2 Inter-rater reliability

It is the degree of agreement among different commentators. It gives the information about the consensus of human judges, and gives the information of a particular scale whether or not it is appropriate for measuring a particular variable. In this research, there are total 8 groups raters who have comment the same hospital (see table20-1)

**Table 20-1 Inter rater reliability analysis between three capital cities**

CITY	Group	rater	Hospital Grade	Stand1	Stand2	Stand3	Stand4	Stand5	Total
Hefei	1	H1.1	3	28	32	25	35	33	153
		H1.2	3	27	16	12	32	25	112
		H1.3	3	36	29	30	50	35	180
Kunming	2	K1.1	3	30	35	29	42	26	162
		K1.2	3	40	35	29	50	37	191
		K1.3	3	28	23	16	26	15	108
		K1.4	3	32	22	21	38	26	139
	3	K2.1	3	19	25	14	18	22	98
		K2.2	3	32	22	27	38	36	155
		K2.3	3	38	24	22	38	34	156
		4	K3.1	2	29	19	17	28	23
K3.2	2		29	23	19	39	25	135	

Shang hai	5	SH1.1	3	15	20	17	28	32	112
		SH1.2	3	22	13	18	37	15	105
		SH1.3	3	22	13	18	38	15	106
	6	SH2.1	1	16	20	24	42	31	133
		SH2.2	1	26	28	23	36	35	148
	7	SH5.1	3	17	18	18	31	34	118
		SH5.2	3	22	16	18	31	27	114
	8	SH6.1	2	19	19	15	30	28	111
		SH6.2	2	25	15	13	25	25	103

In Table 20-1, the pink color means the same comment between different raters. The dark blue color means the similar comment between different raters. From table 20-1, data show that Hefei and Kunming hospital leader do not have the consistent comment to a same hospital.

**Table20-2 The hospitals and the commentators information for Inter-Rater Reliability**

Region	Hospital name	Hospital Grade	commentator	Mean	Std. Deviation	N	sex	profession	education	easy degree-filling	accept this instrument or not	satisfaction to survey	comment
Anhui province	Anhui university teaching hospital	3	rater 1	11.8	4.1	13	male	law	master degree	3	1	1	can improve hospital management
		3	rater 2	8.6	4.8	13	male	management	Ph. D	3	3	2	limited by China policy
		3	rater 3	13.8	4.9	13	female	clinic	Bachelor	1	1	1	help for evaluating China hospital quality service
Yunan province	Kunming university the second hospital	3	rater1	15.2	4.8	13	female	Nurse	master degree	3	1	1	help to develop hospital quality
		3	rater2	11.9	4.9	13	male	medecine	master degree	2	1	2	help to develop hospital q quality
		3	rater3	12.0	4.3	13	male	management	master degree	2	1	2	help to develop hospital quality
		3	rater4	11.1	5.6	13	male	surgeon	master	3	1	2	help to develop hospital quality
	Kunming civic hospital	2	rater1	7.5	3.3	13	female	Nurse	Bachelor	2	1	1	help to promote work quality
		2	rater2	8.9	3.8	13	male	clinic	master degree	2	2	2	
		2	rater1	10.4	3.7	13	male	clinic	Bachelor				
shanghai	kunming community health serice center	1	rater1	9.8	3.9	13	male	clinic	Bachelor	2	1	2	help to promote work quality and find the problems in the work
		1	rater2	3.8	6.7	13	male	clinic		2			help to promote work quality and find the problems in the work
	Kunming university the first hospital	3	rater1	12.5	4.4	13	male	management	Bachelor	2	1	2	help to promote work quality and find the problems in the work
		3	rater2	14.7	4.4	13	male	ophthalmic	Bachelor	2	1	1	the language should match Chinese custom
		3	rater3	10.7	4.1	13	male	management	PH.D	2	3	2	not maneuverability
		3	rater4	8.3	3.9	13	female	urgent medicine	Bachelor	2	3	2	
shanghai community hospital	1	rater1	10.8	4.6	13	female	public health	master degree					
	1	rater2	11.4	4.1	13	male	clinic	Bachelor					
shanghai	shanghai civic hospital	2	rater1	8.5	3.6	13	male	Traditional Chinese Medicine economic managem	PH.D	2	2	2	not policy support
		2	rater2	7.9	3.6	13	female	management	Bachelor	3	3	1	
	shanghai the sixth hospital	3	rater1	9.1	5.1	13	male	Hospital management	PH.D	3	3	2	not maneuverability
		3	rater2	8.8	3.9	13	female	nurse management	Bachelor	2	1	2	
	shanghai zhongshan hospital	3	raer1	8.6	4.0	13	male	surgey	PH.D	2	1	1	not maneuverability
		3	rater2	8.1	5.8	13	female	nurse management	Bachelor	3	3	0	not relationship with current work
		3	rater3	8.2	6.0	13	female	nurse management	Bachelor	3	3	2	not relationship with current work

Though the total score display the diversity between different hospital leaders, for some standards, they gave the same or similar comment if they came from the same hospital. For example, group 1, Hefei hospital leaders, three managers came from one hospital gave very different evaluation result except in standard 1, management and policy. And shanghai hospital

leaders have better consistent comment if they came from a same hospital. There are total 40 groups data and 25(62.5%) group data are similar or the same comment if they came from same hospital. The detail information see table 20-2.

The Inter-Rater reliability is different between different hospitals, some are high, and some are low. The mean of total score is different between commentators if the commentators are over 3. General the inter-rater reliability is good. The detail information shows in Table21.

Table 21 Chinese Version WHOSATHPH Inter-rater Reliability

			Mea n	S. D	Inter-Item Correlation Matrix		
					commen tator 1	comment ator 2	commentator 3
Anhui University teaching hospital		commentator 1	11.8	4.1			
		commentator 2	8.6	4.8	0.62		
		commentator 3	13.8	4.9	0.82	0.70	
Kunming hospital	civial	commentator1	7.5	3.3			
		commentator2	8.9	3.8	0.69		
		commentator3	14.2	4.5	0.87	0.83	
Kunming University the second hospital		commentator1	15.2	4.8			
		commentator2	11.9	4.9	0.91		
		commentator3	12.0	4.3	0.90	0.90	
		commentator4	11.1	5.6	0.24	0.28	0.37
Kunming University the first hospital		commentator1	12.5	4.4			
		commentator2	14.7	4.4	0.79		
		commentator3	10.7	4.1	0.69	0.85	
		commentator4	8.3	3.9	0.40	0.20	0.07
Shanghai hospital	civic	commentator1	8.5	3.6			
		commentator2	7.9	3.6	0.66		
Shanghai community hospital		commentator1	10.8	4.6			
		commentator2	11.4	4.1	0.85		
Shanghai Zhongshan hospital		commentator1	8.6	4.0			
		commentator2	8.1	5.8	0.43		
		commentator3	8.2	6.0	0.43		
Shanghai sixth hospital	the	commentator1	9.1	5.1			
		commentator2	8.8	3.9	0.60		



Correlation coefficients by using Spearman's  $\rho$  to measure the pair-wise correlation in this research. This statistic method assumes if more than two commentators are observed, an average level of agreement for the group can be calculated as the mean of the  $r$  (or  $\rho$ ) values from each possible pair of commentators. However neither coefficient takes into account the magnitude of the differences between commentators. The correlation coefficient is 1, indicating perfect correlation, the higher  $r$  is, the better inter-rater reliability. The statistic result of Chinese Vision WHOSATHPH show in Table 21.

From table 17, the result shows that to a hospital, different hospital leaders gave different scores about the health promotion situation. The average mean of each item shows quite different, for example, Anhui first teaching hospital, one leader evaluated the average mean of the health promotion in the hospital is 8.6, but the others two leaders gave 11.8 and 13.8 average scores. Even they gave very different score mean to total health promotion status, but Inter-Item Correlation among the rators is 0.62, 0.7 and 0.8. These data show that this instrument has better inter correlation even the leaders gave the different score for the status of the hospital promotion. However, these phenomena only exist in Yunnan Kunming hospitals but not in Shanghai hospitals. The reason may be some hospital leaders in Kunming prefer to give more positive assessment to the HPH.

#### **4.2 Test-Retest Reliability**

This test is used to assess the consistency of a measure from one time to another.

In this research 20 cases who are from three cities and different grade hospitals participating in the survey. The interval between test and retest ranged from 3-6 days. Pair T-Test analysis to compare the result between two times, if the result has statistic signification, then it shows that the instrument has no test repeat test reliability. The Pair T-Test result shows Table 16. Meanwhile, correlation efficient was calculated to further assess the retest reliability. There are 20 cases finished Test Retest survey. With T-test pair comparison analysis, each item has non statistic signification different between the first time test and the second time repeat test.

Table22 shows the signification of each items correlation coefficient test, 36 items are less than 0.05, show that these items are stable, show good test-retest reliability. Four items are over 0.05, show these items value without test retest reliability. Standard 4.2.1 is "The employees obey the operational standards and requirements of safety and health. All risk factors in the workplace are clearly indentified"; Standard 5.2.1 is "The patients (and relatives, if applicable) can get the under standard sequent guidelines during the clinic consultation, referring, or leaving hospital"

Table 22 Test-Retest for Reliability of Chinese Vision WHO SATHPH Instrument

		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference		t	df	Sig. (2-tailed)
					Lower	Upper			
					Pair 1	ind1.1.1 - tem1.1.1			
Pair 2	ind1.1.2 - tem1.1.2	0.05	0.22	0.05	-0.06	0.16	1	19	0.33
Pair 3	ind1.1.3 - Item1.1.3	-0.1	0.97	0.22	-0.55	0.35	-0.46	19	0.65
Pair 4	ind1.1.4 - Item1.1.4	0	0.73	0.16	-0.34	0.34	0	19	1
Pair 5	ind1.2.1 - Item1.2.1	0.25	1.02	0.23	-0.23	0.73	1.1	19	0.29
Pair 6	ind1.2.2 - Item1.2.2	0.45	1.23	0.28	-0.13	1.03	1.63	19	0.12
Pair 7	ind1.2.3 - Item1.2.3	-0.15	0.67	0.15	-0.46	0.16	-1	19	0.33
Pair 8	ind1.3.1 - Item1.3.1	0.15	1.14	0.25	-0.38	0.68	0.59	19	0.56
Pair 9	ind1.3.2 - Item1.3.2	-0.15	1.5	0.34	-0.85	0.55	-0.45	19	0.66
Pair 10	ind2.1.1 - Item2.1.1	-0.1	0.45	0.1	-0.31	0.11	-1	19	0.33
Pair 11	ind2.1.2 - Item2.1.2	-0.1	1.59	0.36	-0.84	0.64	-0.28	19	0.78
Pair 12	ind2.1.3 - Item2.1.3	-0.15	0.75	0.17	-0.5	0.2	-0.9	19	0.38
Pair 13	ind2.2.1 - Item2.2.1	-0.25	1.33	0.3	-0.87	0.37	-0.84	19	0.41
Pair 14	ind2.2.2 - Item2.2.2	0.05	1.67	0.37	-0.73	0.83	0.13	19	0.9
Pair 15	ind2.3.1 - Item2.3.1	-0.15	1.09	0.24	-0.66	0.36	-0.62	19	0.55
Pair 16	ind2.3.2 - Item2.3.2	-0.55	1.47	0.33	-1.24	0.14	-1.68	19	0.11
Pair 17	ind3.1.1 - Item3.1.1	0.1	1.07	0.24	-0.4	0.6	0.42	19	0.68
Pair 18	ind3.1.2 - Item3.1.2	-0.1	1.29	0.29	-0.71	0.51	-0.35	19	0.73
Pair 19	ind3.1.3 - Item3.1.3	0.2	1.01	0.23	-0.27	0.67	0.89	19	0.39
Pair 20	ind3.2.1 - Item3.2.1	-0.05	0.39	0.09	-0.23	0.13	-0.57	19	0.58
Pair 21	ind3.2.2 - Item3.2.2	0	0.65	0.15	-0.3	0.3	0	19	1
Pair 22	ind3.2.3 - Item3.2.3	-0.2	0.95	0.21	-0.65	0.25	-0.94	19	0.36
Pair 23	ind4.1.1 - Item4.1.1	-0.15	1.23	0.27	-0.72	0.42	-0.55	19	0.59
Pair 24	ind4.1.2 - Item4.1.2	0.1	1.77	0.4	-0.73	0.93	0.25	19	0.8
Pair 25	ind4.2.1 - Item4.2.1	-0.2	1.24	0.28	-0.78	0.38	-0.72	19	0.48
Pair 26	ind4.2.2 - Item4.2.2	-0.05	1.4	0.31	-0.7	0.6	-0.16	19	0.87
Pair 27	ind4.2.3 - Item4.2.3	0.25	1.71	0.38	-0.55	1.05	0.65	19	0.52
Pair 28	ind4.2.4 - Item4.2.4	-0.05	1.23	0.28	-0.63	0.53	-0.18	19	0.86
Pair 29	ind4.2.5 - Item4.2.5	0	0.73	0.16	-0.34	0.34	0	19	1
Pair 30	ind4.3.1 - Item4.3.1	-0.05	0.51	0.11	-0.29	0.19	-0.44	19	0.67
Pair 31	ind4.3.2 - Item4.3.2	0.2	0.52	0.12	-0.05	0.45	1.71	19	0.1
Pair 32	ind4.3.3 - Item4.3.3	-0.2	1.47	0.33	-0.89	0.49	-0.61	19	0.55
Pair 33	ind5.1.1 - Item5.1.1	-0.05	1.22	0.28	-0.64	0.54	-0.19	18	0.85
Pair 34	ind5.1.2 - Item5.1.2	-0.35	1.66	0.37	-1.13	0.43	-0.94	19	0.36
Pair 35	ind5.1.3 - Item5.1.3	0.3	1.72	0.39	-0.51	1.11	0.78	19	0.45
Pair 36	ind5.1.4 - Item5.1.4	-0.4	1.76	0.39	-1.22	0.42	-1.02	19	0.32
Pair 37	ind5.2.1 - Item5.2.1	-0.25	1.41	0.32	-0.91	0.41	-0.79	19	0.44
Pair 38	ind5.2.2 - Item5.2.2	0	1.3	0.29	-0.61	0.61	0	19	1
Pair 39	ind5.2.3 - Item5.2.3	0.2	1.28	0.29	-0.4	0.8	0.7	19	0.49
Pair 40	ind5.2.4 - Item5.2.4	-0.1	1.45	0.32	-0.78	0.58	-0.31	19	0.76

The Table 22 shows that all items  $P > 0.05$ , indicate that there are no statistic signification different between the former time test and the second repeat investigation. So the Chinese version WHOSATHPH has time reliability.

**Table23 the correlation test for Test-retest Reliability**

Paired Samples Correlations				
	various	N	Correlation	Sig.
Pair 1	ind1.1.1 & Item1.1.1	20	0.86	0.00
Pair 2	ind1.1.2 & Item1.1.2	20	0.99	0.00
Pair 3	ind1.1.3 & Item1.1.3	20	0.63	0.00
Pair 4	ind1.1.4 & Item1.1.4	20	0.90	0.00
Pair 5	ind1.2.1 & Item1.2.1	20	0.74	0.00
Pair 6	ind1.2.2 & Item1.2.2	20	0.48	0.03
Pair 7	ind1.2.3 & Item1.2.3	20	0.82	0.00
Pair 8	ind1.3.1 & Item1.3.1	20	0.66	0.00
Pair 9	ind1.3.2 & Item1.3.2	20	0.56	0.01
Pair 10	ind2.1.1 & Item2.1.1	20	0.89	0.00
Pair 11	ind2.1.2 & Item2.1.2	20	0.39	0.09
Pair 12	ind2.1.3 & Item2.1.3	20	0.75	0.00
Pair 13	ind2.2.1 & Item2.2.1	20	0.72	0.00
Pair 14	ind2.2.2 & Item2.2.2	20	0.57	0.01
Pair 15	ind2.3.1 & Item2.3.1	20	0.75	0.00
Pair 16	ind2.3.2 & Item2.3.2	20	0.55	0.01
Pair 17	ind3.1.1 & Item3.1.1	20	0.67	0.00
Pair 18	ind3.1.2 & Item3.1.2	20	0.55	0.01
Pair 19	ind3.1.3 & Item3.1.3	20	0.72	0.00
Pair 20	ind3.2.1 & Item3.2.1	20	0.87	0.00
Pair 21	ind3.2.2 & Item3.2.2	20	0.89	0.00
Pair 22	ind3.2.3 & Item3.2.3	20	0.89	0.00
Pair 23	ind4.1.1 & Item4.1.1	20	0.60	0.00
Pair 24	ind4.1.2 & Item4.1.2	20	-0.05	0.84
Pair 25	ind4.2.1 & Item4.2.1	20	0.59	0.01
Pair 26	ind4.2.2 & Item4.2.2	20	0.49	0.03
Pair 27	ind4.2.3 & Item4.2.3	20	0.40	0.08
Pair 28	ind4.2.4 & Item4.2.4	20	0.66	0.00
Pair 29	ind4.2.5 & Item4.2.5	20	0.73	0.00
Pair 30	ind4.3.1 & Item4.3.1	20	0.86	0.00
Pair 31	ind4.3.2 & Item4.3.2	20	0.92	0.00
Pair 32	ind4.3.3 & Item4.3.3	20	0.57	0.01
Pair 33	ind5.1.1 & Item5.1.1	19	0.76	0.00
Pair 34	ind5.1.2 & Item5.1.2	20	0.58	0.01
Pair 35	ind5.1.3 & Item5.1.3	20	0.39	0.09
Pair 36	ind5.1.4 & Item5.1.4	20	0.58	0.01
Pair 37	ind5.2.1 & Item5.2.1	20	0.28	0.23
Pair 38	ind5.2.2 & Item5.2.2	20	0.69	0.00
Pair 39	ind5.2.3 & Item5.2.3	20	0.49	0.03
Pair 40	ind5.2.4 & Item5.2.4	20	0.52	0.02

From the above analysis, the results show that the Chinese Vision WHO SATHPH has good repeat test reliability.

### 4.3 Validity Analysis

#### 4.3.1 Test in reference

Validity means a test for measuring an attribute is validity if the attribute exists and variations in the attribute causally produce variation in the measurement outcomes (Denny Borsboom and Gideon J. Mellenbergh, 2004). The construct validity is the degree that an instrument to test what it was designed to measure. Denny Borsboom thought the validity should consider the proposed conception which is on ontology, reference and causality, he argued the current validity theory over focuses on epistemology, meaning, and correlation that a validation research must not be directed at the relation between the measured attribute and other attributes (Denny Borsboom and Gideon J. Mellenbergh, 2004). He proposed conception is not only simpler but also theoretically superior to the position taken in the existing literature, moreover, the effect of the measured attribute on the test scores should convey at the processes.

The source instrument WHOSATHPH was developed by WHO Europe Health Promoting Hospital project work group based on the standards and conception of Health Promotion Hospital given by WHO, the principle author, former WHO Health promoting Hospital international net leader, Prof. Oliver Groene constructed five standards domains for this instrument refer to the hospitals' management policy, the patients' assessment for health promotion needs, patient information and intervention, promoting a healthy workplace and continuity of care provision. The source WHOSATHPH had been test its reliability and validity in 8 counties and 38 hospitals. The reliability test for each domain from 0.77 to 0.88 (Oliver Groene, 2008).

#### 4.3.2 Construct validity

Refer to Construct-Related Evidence, means an instrument does not correlate significantly with variables from which it should be different (namely **discriminate validity**), in the same time it correlates highly with other variables with which it should theoretically correlate (namely **convergent validity**). Factor analysis can be used to identify underlying variables, or factors, that explain the pattern of correlations within a set of observed variables. It is often used in data reduction to identify a small number of factors that explain most of the variance that is observed in a much larger number of manifest variables. So the factor analysis can be used to analysis content related evidence involves the degree to which the content of the test matches a content domain associated with the construct.

Factor analysis usually used to analysis the construct validity of an instrument. Kaiser-Meyer-Olkin(KMO) measure of sampling adequacy. If KMO test P is over 0.7, then factor analysis can be used in these data. Otherwise, factor analysis should not be used in the data analysis. The KMO and Bartlett's Test P is 0.789 at sub-standard level(13 domains) in this research survey, and is 0.754 at standards level(five standards). These results show that factor

analysis can be used for analysis the data at the standard and substandard level. Principle analysis model was used to extract principal factors.

What are the true attitudes lead people to respond to the questions on a self-assessment survey as they really do? Whether or not the investigation result can reflect the theory model and conception? If yes, then the instrument has content validity. Examining the correlations among the survey items reveals that there is significant overlap among various subgroups of items--questions about the health promotion conception tend to correlate with each other. For instance, the questions (items) about standard management policy should correlate with each other, and so on for questions (items) about standard patients` assessment, about standard patients` information, about standard healthy workplace, and about standard continuity and cooperation. So with factor analysis, the number of underlying factors which were investigated can identify what the factors represent conceptually. If the data analysis result matches the original theory model, this instrument could be regarded as validity. The source instrument includes management policy with 6 sub-standards domains and 17 items, patient assessment with 5 sub-standards domains and 8 items, patient information and intervention with 5 sub-standards and 8 items, promoting a healthy workplace with 4 facets 16 items, and continuity and cooperation with 5 sub-standards and 19items . Chinese Vision WHOSATHPH completely keeps the same structure and items of source instrument.

The five standards were used as the analysis variables, principal component extracted method to do the factor analysis, the results show that the correlations effectives between each standard are very high. Except standard 1 is only 0.562, others standards correlation effectives are 0.876, 0.956, 0.879 and 0.841 (see table24).

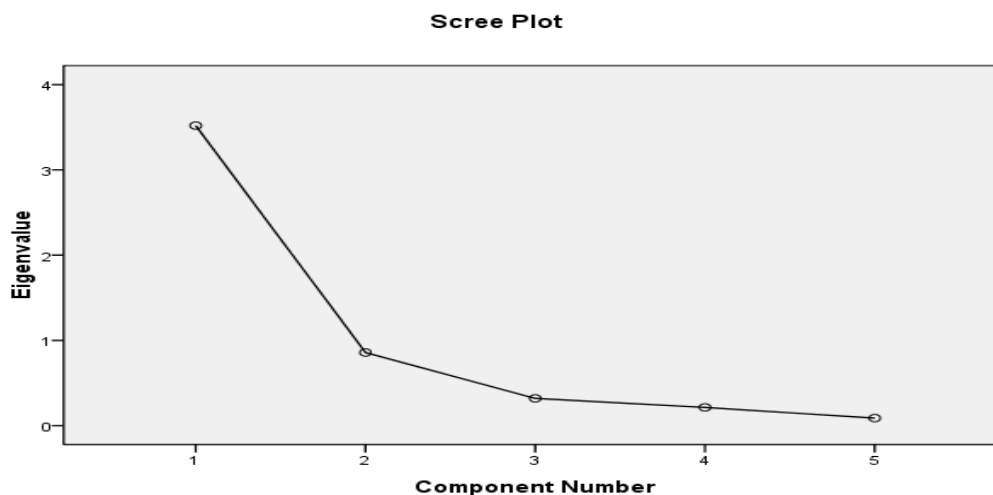
**Table24 Factor Analysis for Validity Test at Standards level**

Comp onent	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.478	69.562	69.562	3.478	69.562	69.562
2	.858	17.158	86.720			
3	.356	7.111	93.831			
4	.222	4.433	98.264			
5	.087	1.736	100.000			

The abscissa in Figure15 shows there are five component numbers were abstracted from data, but only one Eigenvalues (see figure 18). The cumulative rate of the principle factor is 69.6%, the validity coefficient is 0.704. Result indicated that these standards have high relation and they had well cumulative feature and expressed one conception. These results match the original theory

model. So Chinese Vision WHOSATHPH was proved to have general structure validity in this survey but not high. Limited by the number of cases, the valide test for this Chinese version WHOSATHPH could not be generize.

Figure18 The principle factor analysis for Validity Test among Five



#### Standards

Confirmatory factor analysis is a method used to test whether the data fits a hypothetical model. This conceptual structure is assumed that 13 domains should be abstracted 5 principle components because the original instrument has five standards and 13 domains.

Table 25 Total Variance Explanation

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	6.227	47.900	47.900	6.227	47.900	47.900	2.966	22.819	22.819
2	2.263	17.405	65.306	2.263	17.405	65.306	2.282	17.554	40.373
3	1.089	8.378	73.684	1.089	8.378	73.684	2.245	17.270	57.643
4	.724	5.573	79.257	.724	5.573	79.257	1.792	13.787	71.430
5	.595	4.573	83.830	.595	4.573	83.830	1.612	12.400	83.830

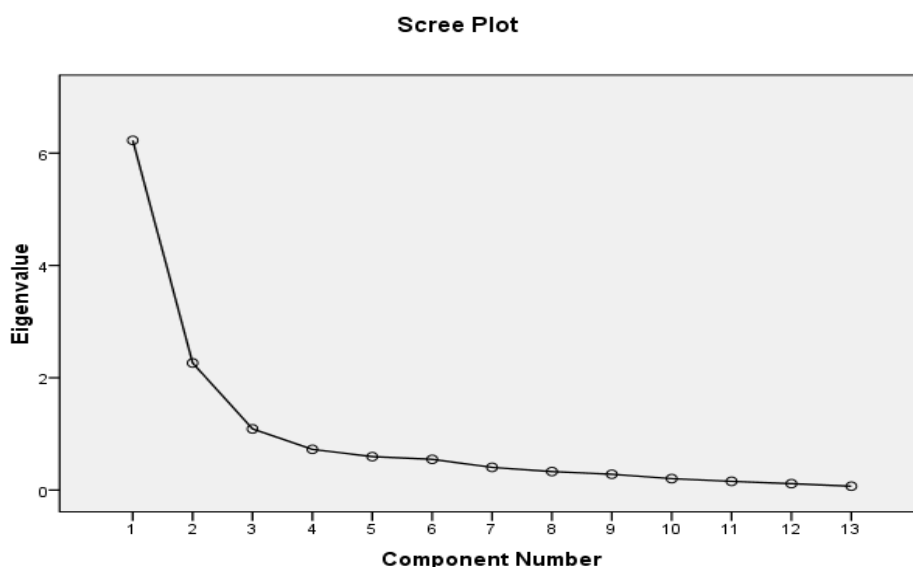
The factor analysis result shows that 13 variables were abstracted into 5 principle factors, the values show the principle factor rate of total factors which contribute to the sums. Table 16 results show that 13 domains have high correlation effective with component 1, but domain1.1 and domain 4.1 have high correlation effective with component 2, no domain has high correlation

effective with component 3, 4 and 5(see table 24). The result show that the five standards with its domain don't have clear conception boundary. However, by method of principle component extraction, 5 main factors which loading cumulative 83.8% of total information (see table 25).

The factor analysis results based on sub-standards of the instrument show that among the 13 variables (13 domains), after principle component extraction, 5 factors were abstracted which loading about 83.8% cumulative information of total factors. The hypothesis assumes that 13 sub-standards belong to five standards, so 5 principle factors explain 83.8% information of health promotion conception. The figure19 displays five principle components contribution rate to total conception of HPH.

The conceptual structure of the Chinese Vision WHOSATHPH assumed that 13 domains belong to five standards, and these five standards contribute to the overall assessment of health promotion. These standards would therefore be expected to load onto only one factor (a hypothetical health promotion construct that matches the original instrument structure). The result shows that about 5 factors were extracted that match the five standards in Chinese Vision WHOSATHPH. Factor analysis results show that Chinese Vision WHOSATHPH has a general construct validity, but the 13 domains with their standards don't have clear conception boundary.

Figure 19 Factors Analysis for Validity Test among 13 Domains



The validity test result shows that factor analysis for the Chinese version WHOSATHPH validity test at domain level is not clear. This could be caused by the unvalid instrument design, it also may be caused by the small sample size and investigation bias. Although Chinese version



WHOSATHPH shows that the general eigenvalues matches the theory structure model, the cumulative is low, and the domain level engenvalues analysis don't well match the theory structure model.

This result may indicate the Chinese version WHOSATHPH might have not good validity. Because this research is small sample size, so the further big sample size research to test the instrument validity is necessary, and it is necessary to test the validity of other language version WHOSATHPH.

## Discussion

## **1 The Reliability and Validity of the WHOSATHPH (Chinese Version)**

### **1.1 Chinese version WHOSATHPH has high reliability**

The reliability of a investigation instrument refers to the stability and equivalence which measures of the same concept over time or across methods of gathering the data. The stability is the consistency for the same respondent given to a same question at different time if the fact didn't change. The equivalence is the consistency of different data gathering methods by different respondents to the same questionnaire (American Psychological Association, 1999; De Vellis, 2003). Nunnally and Bernstein thought if the internal consistency reliability for group level is over 0.7, that the instrument could be considered as reliability (Nunnally Bernstein, 1994).

Though WHOSATHPH has been translated into seven languages ( Oliver Groene, 2008), none of them adapts a culture-cross instrument development research method nor tests the reliability and validity of the translation version. Taiwan has been translated WHOSATHPH into Chinese, however, this Chinese version WHPSATHPH don't published, moreover, there was not reliable and validity test reported for this translation version. There is not any Chinese hospital adapts it. Furthermore, the comparison research related HPH is few, the current research of WHOSATHPH reliability and validity test existed weakness. For example, the comparison research for HPH and Non-HPH by using WHOSATHPH which was performed by Kaja Põlliste et al, defined the Non-HPH were the hospitals which didn't join the HPH Net-work (Kaja Põlliste et al, 2008). Kaja Põlliste et al thought HPH performance result concerned with quality management effect, however, the hospitals which have well quality management system may do not join the HPH Net-work, so their research conclusion may have bias.

This Chinese Vision WHOSATHPH development was performed completely an entire cross culture research procedure as an international instrument development. The translation was experienced forward translation, backward translation and comments translation three stages. The authors of source instrument help to comment the translation quality. Besides ensuring the quality of the translation, this research performed a pilot test which was performed in Montréal. 8 Chinese health professionals who had been worked in Chinese hospitals or health institution accept the interview for pilot test. The Chinese version was revised and updated after each investigation till form the formal Chinese translation version. There were total 15 words (including phrases) were changed or revised through the pilot test. In the pilot test, only one 48-years-old TCM female doctor thought this questionnaire was difficult to understand, the other 7 health professionals thought this Chinese version WHOSATHPH was easy to understand and no difficult word, especially 2 public health professionals thought this instrument was very easy for them.

Furthermore, to evaluate the content equivalence between the Chinese version WHOSATHPH with source English versions WHOSATHPH and to comment the translation quality of Chinese version, this research supervisor, the author of WHOSATHPH and a native American checked the quality of backward translation. The equivalence comment document includes all the parts of WHOSATHPH. There were 37 of 40 items were marked as completely the same or almost the same meaning by three evaluators, only 1 of 40 items was regarded as different meaning by the author of original instrument. This item which marked difference meaning by three evaluators was caused by the word `match` the back translator used `satisfy` replace `match` is more in line with the MHRPC`s quality requirement to China hospitals.

The spot field investigation for reliability and validity test which included 3 core capital cities, 22 hospitals and 40 hospital leaders. In addition, 2 health ministry officers and 1 hospital management professor accepted deep interview. 24 cases thought this instrument was easy to understand, but 16 respondents thought it was difficult. Result of total items of this instrument Cronbach's Alpha is 0.938, between the domains Cronbach's alpha values is 0.896. The Cronbach's alpha for standard 1 (hospital management policy) is 0.793, for standard 2 (the patients' assessment for health promotion needs), is 0.819, for standard 3 (the patient information and intervention) is 0.807, for standard 4 (promoting a healthy workplace) is 0.785 and for standard 5 (continuity of care provision) is 0.755, the Split-half models analysis by the correlation is 0.86, Guttman split-half reliability is 0.91. These results show that Chinese version WHOSATHPH has reliability. Moreover, however, the Cronbach's alpha may also be influenced by the number of items of the instrument.

Paired T-Test for 40 items, the significance p was from 0.1-1, indicated this WHOSATHPH (Chinese Version) is stable and is in consistency with different times to test the same concepts. To test the equivalence of the information obtained by different hospital leaders in the same hospital, the inter-Rater Reliability was also tested. Eight hospitals were evaluated by two or three hospital leaders to test the different raters evaluation equivalence. Shanghai hospital leaders showed better equivalent results, but Hefei and Kunming hospital leaders showed separated equivalence and non equivalence. In each of those hospitals, there was a hospital leader gave very different scores than his peers to the hospital health promotion situation. However, at the domains level, to some standards, all the hospital leaders gave the same comment, though different raters gave different comments to a same hospital may throw off the ratings somewhat, nevertheless, these results may also indicate that it needs further research to study its rater reliability through big size random sampling investigation.

## **1.2. Factor analysis shows that Chinese version has general content validity**

The original instrument tested the reliability through 32 hospitals and 8 countries, the researcher did not externally assess the reliability or validity of the data (Groene Oliver, 2008). Moreover, although Oliver Groene et al researched the reliability and validity of WHOSATHPH, they defined the HPH as those hospitals who were members of WHOHPH Network (Oliver Groene, 2008). However, the question is whether or not the hospital that joined the WHOHPH net matches the conception and principle HPH?

Factor analysis usually used to analyze the construct validity of an instrument. WHO defined the conception of Health Promotion Hospital into five standards, this Chinese version WHOSATHPH total has five standards and forty items. The management policy standard has 3 domains and 6 items; The standard of patient assessment has 3 domains and 5 items, the patient information and intervention standard has 2 domains and 5 items, the standard of promoting a healthy workplace standard has 3 domain and 6 items, and the standard of continuity and cooperation has 2 domain and 9 items. In this study, KMO measure of sampling adequacy at standard level is 0.789 and at sub-standard level (domains) is 0.754, displays that factor analysis can be used for analysis the structure of this instrument at the standard and substandard (domain) level. Principle analysis model was used to extract principal factors, the conceptual structure of the Chinese Vision WHOSATHPH assumed that 13 domains belong to five standards, and these five standards contribute to only one overall conception of health promotion. These standards would therefore be expected to load onto only one factor (a hypothetical theory structure should match the original instrument structure). The result shows that 5 factors were extracted with one principle component which loading about 70% information of total conception. It indicates that Chinese version WHOSATHPH has general theory construct validity but not high. At the domain level, 13 domains were extracted five principle components which contribute 83.8% conception information of the total. However, the 13 domains don't have clear conception boundary which belong to one component. This result indicated that even this Chinese version WHOSATHPH is high reliable and has general content structure validity, but its construct validity is not sensitive and 13 sub-domains doesn't show clear conception boundary.

In addition, 35 hospital leaders who answered the acceptance question, only 17 of them(48.57%) will accept this instrument in their work, 15 of them refused it, 3 of them were not sure. Although one Shanghai ministry governor thought this instrument was valuable and will accept this instrument, and another Shanghai government officier and two hospital management researchers thought it was valuable to do this research, nevertheless, they thought this instrument is too abstract to use for evaluating hospitals' health promotion degree effective even HPH topic deserve research. Because this research is small sample size, so the further big sample size research to test the instrument validity is necessary, and it is necessary to test the validity of other language version WHOSATHPH.

## **2. Features of the Development Method for WHOSATHPH (Chinese Version)**

### **2.1 This research adopt a completely standard cross-culture instrument development process**

In this research, the source instrument was translated into Chinese by this project researcher who has a clear and detailed understanding of the instrument and the population who will use the instrument. Then eight bilingual Chinese health professionals reviewed the translation document, checked any inconsistencies between the source language version and the translated document, moreover, the translator discussed and resolved issues with focus group members related to the maintenance of the integrity of the source instrument in terms of conceptual, semantic and technical equivalence. Moreover, the backward translator was informed that his translation work is about WHO Health Promoting Hospital instrument, to ensure the back translator's work is appropriate to the methodology without introducing bias into the process, the back-translator promised not know and not read the original English version before completing the translation.

The focus group people met the same demographic features with target people by professional, educational background, gender and age. Moreover, the hospitals' features cover most China hospitals' or organizations' feature by grades and size. The focus group members in this research are all leaders or experts in field of hospitals or health Management, and they could support the investigation going on smoothly in China, and supervised the translation document quality and comment the instrument utilization.

### **2.2 This research was supported greatly by local university hospital management researchers and hospital leaders.**

First of all, three typical diverse regions with different economic development level were involved in this research, these three core capital cities locate East, Middle and West regions which stand for diverse level of economy development. Investigation was performed in Shanghai, Hefei and Kunming. Shanghai locates in economic developed region, Hefei is in middle economy developed region and Kunming locates in less economy developed region. These cities stand for different culture characters which are modern international culture (Shanghai), traditional Chinese culture (Hefei) and multi-ethical culture (Kunming). Second, the hospitals in this research are covered all grade of China public hospitals and stands for different size and function sorts. In each cities, the biggest and typical hospitals in different grades and different function sorts in local region were surveyed. Moreover, this research was supported by local Medical University and Research

Institution, strictly data collecting method reduced the bias of investigation, ensured the quality of material and reality of information.

In each city survey, there was a chief leader of Public Faculty of Medical Science University helped to perform this research, they contacted the interviewees or respondents and arranged the appointment for the investigation. Public School of Fudan University supported the investigation part in Shanghai hospitals. The Public Health Administration Faculty of Anhui Medical University supported the survey of Hefei hospitals. Public School of Kunming Medical University helped to finish the Kunming hospitals survey. Moreover, the survey ways of Chinese Vision WHOSATHPH was developed by integrating interview, mail and telephone three survey methods. All the interviews and spot field investigation was implemented by the same person, this project principal researcher. Most respondents were given an interview, shorter or longer refers to the questionnaire and instrument before they finished the questionnaire and instrument. Some hospital leaders were accepted about 60 minutes deep interview by this project researcher.

In Shanghai, there was 3 Grade III hospitals, 2 Grade II hospitals, 4 Grade I hospitals were surveyed, total 17 people filled the instrument and 13 of them finished repeat test investigation, 15 of them accepted a deep interview. In Kunming, there were 2 Grade III hospital, 1 Grade II hospital and 2 Grade I community health centers were investigated, total 15 hospital leaders filled in the instrument and 3 hospital presidents accepted deep interview, 5 of them finished repeat survey by mail. In Hefei, there were 4 Grade III hospital, 1 Grade II hospital and 3 Grade I community hospitals were investigated. Total 10 hospital leaders filled in the instrument and 3 hospital presidents accepted short interview and 4 people finished repeat survey by e-mail.

Because MHRPC always pays attention on Chinese health service evaluation, and Chinese health government compels Chinese hospital to implement the evaluation standard of quality management. Comparing with the instrument of quality management evaluation standard system that was developed by MHRPC, WHOSATHPH evaluation standards covers all area notional and principled of HPH and its evaluation methods is flexible in operation, focus on quality assessment, ,but MHRPC quality management evaluation standard it focus more on patients satisfaction, mangement policy and quality and patient`s safety but ignores the health professional health promotion and healthy workplace development, moreover, it only covers most part of principle and conceptionm of HPH, and there is only the quantility score not the comment part which can make note to record the valuable quality information. Neverthelss, the evaluation questionnaire that made by MHRPC is more detailed and more easily to operate and to follow than WHOSATHPH, and it can give the quantity data to analysis the hospital service quality development level, also it can investigate the statistic data for assessment of the hospital manegement effectiveness.

### **3 China Hospital Management model**

#### **3.1 The policy and the purpose for the hospital service**

Although Chinese government only invest 1% of its total expenditure on health, even the total health expenditure is always less than 5% (many years even lower than 2% ) of Chinese GDP, China government never change their health promotion value. China government thought TCM is an accessible, affordable, safe and effective important tool to handle with China health care service needs. Influenced by TCM, health promotion is the core value and guideline of China health care system.

From the theory of Chinese policy, the government always announces the health development strategy as: focus on the prevention disease, union TCM and Western Medicine, depend on the large sized people`s participation. MHRPC emphasize the health work should combine with the public movement. TCM is different with western medicine because TCM integrated health philosophy, value and culture concern to social science. TCM thought that the most important thing is to prevent disease and treat ailment in time so as not to let it become a serious one. And this is also just what is required by the modern preventive medicine. Moreover, TCM supports mental healing, emphasized the mental role and influence in disease treatment, proposed that disease treatment should treat the mental problem, should lay stress on the harmony between mind and body, man and society, as well as man and nature.

#### **3.2 The evaluation standard system for China hospitals**

The principles for China hospital management is classify the hospitals into different grade and regulated the hospital`s function and mission and service extend and demands according to its grade. Generally, the hospital classify principles are following (China Ministry of Health, 1989) :

The theory for classifying Hospitals` grade was based on the principles of modern hospital management and the feature of the implementation of standardized hospital management. The purpose of management is to meet the needs to develop China Health and Medical science.

China hospital grading management is at different levels based on the hospital functions, tasks, facilities, technical construction and the quality of medical services

The hospital setting and classification should ensure to help for the proper organization structure of medical and health network in urban and rural region. Moreover, it should ensure to perform the reasonable function performance well in the local hospitals and organizations and their network.

The evaluation work should be unified planned and performed by local health government according to regional health developing plan.

All grade hospitals should be developed and improved as the bi-directional referral system. Moreover, the technical guidance and support and communication relationship between different level hospitals should be developing.



To perform the above principles and goal, Ministry of Health Republic .People China (MHRPC) adept hospital classified management model which classified hospitals by three grades and ten sorts through an expert panel evaluation system (China Ministry of Health,2000).

Grade I Hospital is directly responsible to one community people to provide the medical or health service. It is mainly responsible for the disease prevention, education, offering medical, health care (for women and children) and healing service etc for public, similar like community hospital. Grade I hospital must have at least 20 sickbeds and should have correspond equipment and human resource which regulated by CHM. It is supervised and managed by borough government and health ministry. Grade II hospital performs the same functions as the Grade I hospital but at upper level. Grade II hospital is responsible for guiding and cooperating with its inferior community hospitals work within several communities; moreover build up mutual patients' deliver regulation and support system with its community hospitals. It affords quite higher quality medical service and takes on the teaching and research duty. Grade II hospital should have above 100 sickbeds, its medical equipments and building settings must match the conditions that the MHRPC has prescribed (See table 5).

Table 5: 2006 Number of China Hospitals in different grades and class

		General Hospital	TCM Hospital	TCM-WM Hospital	Specialized Hospital	Health care Center	Disease Prevention & Treatment Center
Total	19852	13372	2720	245	3282	3051	1365
Third Level	1182(6%)	728	194	19	237	63	19
1st Class	704(59.6%)	439	122	13	127	32	2
2nd Class	326	223	56	5	41	18	1
3rd Class	15	8	0	0	7	1	2
Second Level	6608(33.3%)	4306	1553	60	612	478	91
1st Class	3521(53.3%)	2322	901	28	243	228	23
2nd Class	2187	1495	478	20	165	130	23
3rd Class	95	63	14	2	11	6	1
First Level	4685(23.6%)	3867	214	44	524	684	67

1st Class	2563(54.7%)	2287	66	18	175	524	21
2nd Class	430	356	22	3	46	57	7
3rd Class	93	67	13	3	9	1	4
Others	7377(37.2%)	4471	759	122	1909	1826	1188

(Data was edited base on the Source data from China Ministry of Health Statistic Report 2007, <http://www.moh.gov.cn/publicfiles/business/htmlfiles/zwgkzt/ptjnj/200807/37168.htm>)

Grade III Hospital is the highest level specialist medical organization or health research center which is responsible for several regions, its main functions include teaching which is for medical university students, training which is for health staffs working in grade II or I hospitals, Medical science research which stand for several regions level, clinic and hospitalization treatments for complex diseases and referred patients from lower hospital (Ding Han Zhang, 1999).

After the assessment of the hospital, the hospitals were identified as A, B and C class according their score. See table 4. Each grade had three sorts except grade III hospital adding “super” class. The hospital’s classification management adept cooperation form. The assessment standards which to evaluate the hospital grade were set up by MHRPC. But the provincial health care ministry took on the duty of organizing an experts’ panel to evaluate the grade II and grade III hospitals, and identified the hospital’s class under each grade, except the grade III super hospital was evaluated by MHRPC. The other hospitals were evaluated by the municipal health care ministry (Ding Han Zhang, 1999). The number of grade hospitals is limited according to the regional health plan, that means only a few or one grade III hospitals in a province or a city.

The assessing instrument to evaluate a hospital grade total has 1000 score which including about 400 items, covering the hospital size, function, duty, administration, quality of medical service, patient safety, environment protection, the culture and the value and its philosophy of the hospital etc domains. According to the assessing criterions, Class A hospital should get over 900 scores, class B should get the scores between 750 to 899, if scores less than or equal with 749, then belong to class C hospital.

Different grade hospitals or different class hospitals have different degree finance support from the government, and their standard of medical services charge is very different. The more upper grade, hospitals can get more financing support and better developing space. However, the number of a grade of hospitals is limited by the regional population quantity and disease sorts because of the health development plan that should match the region health layout. But the hospital is encouraged to develop to class A hospital because it stands for the quality of the hospital medical service. Furthermore, the lower level health government and health institutions

must accept the upper government periodic evaluation and inspection; the inspections are organized by the different level superior governed departments. The evaluating results of hospital will be published, and may influence the future government's finance investment and the hospital rector's promotion.

To perform higher effectively health care system, MHRPC also classified Chinese hospitals are as general hospital and special hospital. China has 13120 General West Medical Hospital (WM hospital), 2625 Chinese Traditional Medicine Hospital (TCM hospital), 211 hospitals that combine with the medicine technique of Chinese traditional medicine and west medicine (TCM-WM hospital). Besides these, there are 196 Minority hospitals<sup>1</sup> and 3022 special hospitals<sup>2</sup>. In 2006, China has 19246 regular hospitals, 40791 community hospitals, 22656 community health centers, 274 healing centers, 6589 clinic and urgent medical service centers and 205814 clinics. Among of them, there are 331 hospitals own over 800 sickbeds, 764 hospitals own over 500 sickbeds, 6653 hospitals own over 100 sickbeds, 11516 hospitals own less 100 sickbeds (China Health Statistic, 2006). In addition, China hospitals are also divided by military and regional hospital, some regional hospitals are governed by MHRPC, some hospitals were managed by a company. However, even the hospital were quite independent and not governed by MHRPC, they have to abide the same health policy and work standard.

Nowaday, China is engaging on health care reform and the hospitals management are changed to follow the international classification method and management model that identify the hospitals as public and private, profit or non profit. However, this reform is not successive and the public hospital's reform is still exploring, the old classification model made China hospitals perform quite higher effective medical service even under very complex and hard social condition, even in so indigent financing support and corruption government (Chen LuoJia, 1999, Du Lexun, 2007). In recent years, some grade III hospitals hope to join the international hospital evaluation system to win an international authoritative qualification, some hospitals adept ISO9000, few hospitals adept JCI evaluation systems. MHRPC initiated a large-scale vigorous movement named as `Quality Management Year`, which has lasted several years to evaluate quality of hospital medical service. The goal of this movement aims at continuing improving quality of medical service and patients` safety for all hospitals in China. The standards of evaluation system were developed basing on the former frame of hospital grade evaluation system which presented above. But the new quality evaluation standard system added a few indicators which is related to patients` satisfaction and patients` education.

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<sup>1</sup> Minority hospital is the hospital adopt the national medicine to serve patients.

<sup>2</sup> Special hospital is the hospital only receives certain particular disease patients, for example, Tumour hospital, ophthalmic hospital, psychotic hospital etc; or certain kinds patients, for example, Children hospital, maternity hospital, gerontic People hospital.

China mix TCM and Western Medicine value and culture decided China HPH development, and it was also displayed in this research investigation. In the spot field investigation that was performed in three Chinese three core capital cities(Shanghai, Hefei and Kunming) stood for different levels of economic development and different cultural and ethnic features in China. The 22 sampling hospitals not only covered all grades of hospitals and functionality but also stand for the local different health development level. 40 hospital leaders and 3 hospital management researchers or official who were volunteer to accept this investigation and interview and to give their true comments. Except filled the questionnaire survey, most hospital leaders also accept a deep interview about their opinions to WHOSATHPH. The investigation shows that China hospital leader gave quite higher general self-assessed score of HPH. Among of the five standard, the continue and cooperation domain and healthy work place get better score, the hospital management and policy got the lowest score. The five standard scores' mean from the highest to lowest were, standard5 (continuity and cooperation) 28.95(72.4% of full score), and so forth were: standard4 (healthy workplace) 35.71(71.4%), standard3 (patient information and prevention) 21.34 (71.1%), standard2 (patients assessment) 23.85 (68.1%), standard1 (management and policy) 28.17(only 62.6% of full score).

Moreover, different Grade hospitals didn't show statistic signification difference, means the big super teaching hospitals didn't show better health promotion result than small hospital or community hospitals in China in this research. This result shows that China big hospitals has the similar HPH development level with small hospitals. This result is different with Oliver Groene research that he thought big hospitals have better health promotion level. The result was also match China hospital management model. For example, Shanghai government ministry force Grade I and II hospitals to perform HPH and most China hospitals follow an unique quality service standard and uniform management model. Furthermore, even Shanghai obtained the highest health promotion result in China, however, Kunming hospital leaders gave more higher HPH score mean than Shanghai, followed by Hefei hospital leaders. In the investigation, one Kunming grade III hospital leaders showed more strong attitudes and ability to HPH development than same grade Shanghai hospital leader, and that Kunming hospital has more perfect management documents and regulation than the sampling Shanghai Grade III hospital. Although all China hospitals have to follow the uniform hospital management standard and regulations issued by MHRPC, however, Kunming and Hefei Ministry Health government don't perform the strict monitor and evaluation management standard to the local hospitals. In Kunming and Hefei, the hospitals need not be compelled to implement HPH by local health ministry government and the ministry government of Kunming and Hefei don't have the strong monitor and evaluation management policy as Shanghai Health Ministry has had to develop HPH.

### 3.3 The rough analysis for its health promotion development

Groene Oliver found in his research of HPH development in Europe that bigger hospitals may have better possibilities to implement the health promotion standards than smaller hospitals, in particular when it comes to the provision of a wide range of health promotion services and activities, because the big hospitals may have more achievable economies resource than for smaller hospitals (Groene Oliver, 2008). However, their research result doesn't appear in this research survey.

According to China hospitals method of classification, Grade III hospital is bigger than Grade II not matter in sickbed size or finance support; moreover, the medical science technique and equipment are more advanced in higher Grade hospital than in low Grade hospital in China. In this research, the Grade III hospitals that were investigated and interviewed are all the best or most advanced hospitals in these three cities, moreover, as a teaching and leader hospitals, the sampling Grade III hospitals in this research not only stand for the local (province) medical develop and management level, but also can be regarded as the model or the epitome of China public hospital management because of China unified management model and policy integrate feature.

Grade II and Grade I hospitals that investigated and interviewed in this study are also the well developed hospitals in local. Even if they might not be the most famous hospitals or most finance support hospital, but there was no hospital which without good fame or quality management entering this research. Moreover, because the sample hospital were chose by non random sample, the sampling hospitals in this research almost can stand for the advanced medical service level and highest management level in local province or city. Among the total 41 hospital leaders respondents, 21 of them work at Grade III hospitals, their total self-assessment score mean is  $154.19 \pm 7.34$ , 9 Grade II hospital leaders self-assessment score mean is  $158.67 \pm 10.7$ , 11 Grade I hospital leaders self-assessment score mean is  $144.82 \pm 14.54$ . Even Grade I hospital (community hospital or community medical service center) total score mean lower than Grade II or III, they don't have statistic signification difference. This result is also the same in each standard. Five standards don't show the statistic difference signification between different grade hospitals.

In addition, there is an interesting phenomenon in this research. Among three Chinese capital cities, Shanghai is China most well know healthy city and owns the most advanced medical science technical hospitals and also won the best health promotion effect in China (MHRPC health statistic report, 2008). However, Shanghai hospital leaders did not evaluate high level HPH comparing with another two capital cities' hospital leaders. Kunming hospital leaders assessed the highest level HPH even it locals in most undeveloped area among these three cities

and most undeveloped economic condition and medical service level. Although the hospital leader may tend to give high praise to their hospital health promotion status, however, Kunming hospital still have some special features in health promotion development. They paid more attention on public education activity and care much more their supervised authority government evaluation.

In this research, Kunming grade I, II and III hospital leaders all gave high scores to health promotion in their hospital. There were 2 Grade I hospital leader took part in the survey, the score mean of HPH given was 168.5, 3 hospital leaders came from Grade II hospitals given the score mean was 165.33, 8 Grade III hospital leaders gave the evaluation score to their hospital was 170.13. The full score for HPH was 200. There were total 12 Shanghai hospital leaders joined the survey, the generally assessed to HPH are the lowest in every Grade hospital among these three cities. For example, the total score mean for Grade III hospital, 6 Shanghai Grade III hospital leaders estimated the HPH score mean is 129.33, 5 Hefei Grade III hospital leader estimated score mean is 148.2, 8 Kunming Grade III hospital leaders estimated score mean is 170.13. As for the substandard (domain), the standard of management policy domain, patients' assessment, every grade Kunming hospital leaders gave more higher score than Shanghai and Hefei hospital leaders. For example, even Shanghai hospitals have the best objective condition of hospital technique equipment and environment, however, the standard of patient information and intervention domain and development healthy workplace, the Kunming hospital leaders still gave the highest score mean more than Shanghai and Hefei hospital leaders. For the continuity and cooperation standard, Hefei hospital leaders gave the highest score mean than Shanghai and Kunming.

Generally, the score means of all the 13 domains were over 50% of full score, 2 domains (domain 1.3- evaluating the level of monitoring the medical service quality and domain 2.2--evaluated patients' HP need at the first visit) got the lowest score mean, less than 60% of full score. Their means were 5.15(full score 10) and 5.63(full score 10). This research results also show that these three cities hospital leaders marked their hospital health promotion in quite higher level. 7 standard domains score means were over 70% of full score, the highest score mean is domain 4.1, 8.73(full score 10), it measured the hospital development and implementation of healthy and safe workplace. Then is the domain 2.1, the score mean is 11.24(full score 15), it measured the hospital take actions to make all patients access to all their needs of health promotion. The domains 1.2 was also given high score mean 10.98(full score 15), it shows that the hospital leaders thought that their hospital arranges the resources for the implementation of health promotion.

However, the total score or each standard score mean don't have statistic significance difference in this limited simple size analysis. Shanghai and Hefei don't have statistic significance difference, Kunming hospital leaders self-assessment result shows better than Shanghai and Hefei. The

highest rate of score is Standard 5 (community and continuity); the mean is 28.95, 72.4% of full score, followed by standard 4 (patient information and intervention), the mean is 35.71 (71.4% of full score is 50), the lowest score field is standard 1 (management and policy), the mean is 28.17 (62.6% of full score is 45). These results show that China hospital leaders thought Chinese hospital are doing well in developing the continue health service and cooperation health service, and in developing healthy workplace, and providing the information for patients and performing the quality medical intervention. These results match current Chinese health development situation. Because MHRPC implemented the supervision movement < The Year for Quality Management > in every city from Grade II to Grade III hospitals in China since 2005, in group to improve hospital medical service quality basing on patient-centered (MHRPC, 2005). The continuity and cooperation have already been regulated in hospital grade classification management standards which always regarded as a very important evaluation indicator for Grade II or Grade III hospital in every evaluation activity. The continuity and cooperation are one duty for Grade II or Grade III that must be followed. So the results can prove one measure validity of Chinese version WHOSATHPH in some way.

Furthermore, as an undeveloped remote city in China, from one side, it help Yunnan keep more local native TCM culture and value even in last two decades of health marketing reform. From another hand, because of the undeveloped economy, and many minority nationalities live in Yunnan, as its capital city, Kunming got many international health research project ( WHO and World Bank Health research project), these health care research projects influence local health promotion development. In this research, Kunming sampling hospitals displayed quite well organization and management in HPH development, what they have done is better than Hefei and Shanghai hospitals in this research observation. This influence was reflected from Kunming hospital leaders self-assessment to their hospital health promotion, they gave higher level score than Shanghai and Hefei. Furthermore, during the interview, Kunming's hospital leaders displayed that they very cared about the supervision which was implemented by their Superior competent authority, the evaluation standard < hospital quality management evaluation > which was developed and performed by MHRPC is followed strictly. Maybe that is one reason why Shanghai has the highest health promotion effect in China, Shanghai hospital leaders self-assessment score for their HPH is lower than Kunming in this research investigation.

## **4 The value and culture of TCM and its role and influence to China HPH development**

### **4.1 Health promotion value and philosophy in China's traditional medicine culture**

Although the HPH concept was proposed in the Ottawa Charter in 1986, HPH's core values and philosophy principles have already been developing something similar to it in TCM in China for thousands of years.

The philosophy of TCM is disease prevention first, TCM focus on humane medical services that emphasizes the value of a patient's orientation (patient centered), hold the holistic biological views on diagnoses of disease which reflect the value and principles of HPH. The culture and value of TCM advocate humane spirit, stating that life was the most important more than anything else and disease prevention was more important than disease treatment (Qiu Liming, 2008, Zhang Qi Cheng, 2008). So the core culture and medical value of TCM is <Treat before disease onset>. TCM view of < Treat before disease onset> has some important different principle with western Preventive Medicine. TCM emphasizes that doctor treatment the patients must consider the prevention disease at the same time, and state that to prevent the diseases also should base on the information of disease treatment experience (Liu Hongyan, 2008). TCM practitioners prevent and cure diseases with an accessible, affordable and effective way which is a whole set of methods. For example, the Chinese medical herbs treatment, acupuncture, moxibustion and massage, *Taiji* which help people have a calm and peaceful mind and glow with energy all day and build up body strength. In China, almost all general western hospitals had TCM department to offer TCM service. TCM prevents disease in four seasons from food nourishment and diet treatments to cupping therapy and cutaneous scraping therapy.

For example, the TCM Bible, the *Inner Canon Huangdi* ( Inner Canon Huangdi, BC 99 to 26 ) advocated humane spirit, stating that the first value for medical service is to save life but not focus on disease, so it stressed the holistic treatment and expounded the principle of considering the environment influence and autologous immunity. It advocated the disease prevention was more important than disease treatment, pointed out ` excellent doctor treatments patient before disease become serious` ( Inner Canon Huangdi, BC 99 to 26 ). During TCM's two thousand years of history since then, the book's core values and principles of health service that stress prevention first, humane attention on medical services emphasizing a patient's orientation (patient centered), holistic biological views on diagnoses of disease, morality first and reflecting morals through excellent quality of medical service, benevolent principles, and ideal and moral orientation has already melted into the blood of Chinese culture, rooted deeply in Chinese culture values (Qu Limin,2008, Li Junsheng,2007,Cao Zenghuai,2008). Because of the deep influence of the cultures and values of TCM, Chinese people have readily accepted the view of the primary prevention of disease, self-protection, and improvement on health and regard the health profession as a benevolent and noble profession. This makes for a very different aspect of China's hospital management models when compared with other countries where HPH has been implemented.



During TCM's two thousand years of history since then, the core values and principles for health service in Inner Canon and were developed further by the subsequent great TCM doctors. For example, Zhang Zhongjing stand that patient should know self-protection and pointed out that the food and environment could prevent people from disease also food and environment were the cause of disease (Zhang zhongjing,150-219). Another great TCM doctor Sun Simiao (581-682) was regard as TCM medicine god, developed the principles of Inner Huangdi and the theory of Zhang Zhongjing, in his book < Urgent Medicine Stepholidine Prescription>, he systematically discussed the principles and strategies to live healthy and longer( Sun Simiao, 652). He classified the doctors into three grades, he said ` the most excellent doctors who treatment the diseases before it forms, the secondary doctor who treatments the disease when it is forming, the inferiority doctor who treatment the disease after it formed`( Sun Simiao, 652). Furthermore, he first time emphasized the importance of the personal morality and professional morality as a doctor which he thought doctor`s morality was more important than his skill and knowledge, and immoral person could not be a doctor otherwise he was equal as a criminal. He stressed that the doctor should treat patients equally without discriminating patient by background, wealth, age, and intelligence etc. Xu Dachun thought that people should take care themselves when they felt uncomfortable so that to prevent disease developing further, otherwise, the disease will become more and more serious (Xu Dachun, 1746).

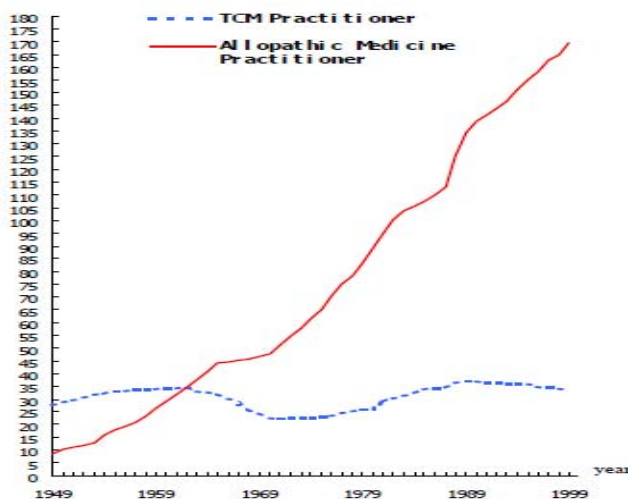
These famous TCM founders developed the health promotion philosophy of the prevention view, holistic value,patient-center. It focused on life but not only on disease, stressed the nutrition and environment influence in disease treatment and prevention, stressed on patient`s participation in disease treatment(Qiu Liming, 2008, Zhang Qi Cheng,2008).

#### **4.2 TCM Hospital Development in China**

Before 1949, China had no general TCM university and hospitals. When western medicine input China in the end of 19 century, Chinese accept quickly the western medicine system and western medicine became China national health care system. Since 1949 TCM has been accepted as same important as western medicine in national official health system to handle the serious lack medical resource and worse health situation. Moreover, TCM management and development was adopted as western medicine model. TCM hospital develops from zero to 2720. TCM universities have also created at least one in each province. From 1949 to 1959, TCM doctors were more than western doctors, TCM was the main power in health care system even the MHRPC leaders were western medicine professional expert. TCM played an important role in national health care system because of the lack of health resource, edpecially no medical equipments and doctors. TCM hospitals grew more fast than western hospital from 1950 to 1990. But the doctors quantities did not increase. TCM hospital grew from 4 to 2080, and western general hospital increased from 2692 to 10424. In 2007, TCM hospital quantity increased to 2720, there were 276,000 TCM doctors in China in 1949. In 2001, there were 334,000 doctors, an increase of only 21% than in

1949, but there were 87,000 Western medicine doctors in 1949, and the figure has been increasing more faster than TCM year by year since 60s(see figure 8).

**Figure 8 The number of TCM doctors**



Source: China Statistical Yearbook 2002

Especially after China economic reform (China Health Statistic, 2008). Since the 21st century, China's hospital services have developed towards diverse value directions. This is in part because western medicine's spread and development in China since 1989. Moreover, the culture and values of the health care system were still Chinese in its traditional structures which did not lend itself to ready acceptance of the values and culture of western medicine. The Chinese merely learned western medicine's science based technology.

However, although TCM are regarded as the same important as western medicine by Chinese government, because of the health care service marketing reform, government withdrew the finance support from health care system, hospital management model had to go for profit therefore TCM development was destroyed in marketing health reform. Because of the culture and value of TCM, TCM could not make profit as other western medicine department, more and more hospital cut off the TCM service for earning more profit. Fortunately, MHRPC gave up the marketing orientation health reform, returned back health promotion value and Chinese government invested more and more capital in health care system, to reach the goal of universal primary health care service to every Chinese, TCM service become popular and get more and more local government support because of TCM cheap and convenient and less side-effect feature. Some regional health government stressed TCM service provided at Grade I hospital.

### 4.3 The role and influence of TCM to China HPH development

#### **TCM's benevolent philosophy shaped the core value of China's medical service.**

Chinese society in the old time adored the ideal and value of Confucianism, that a man's value of life reflected from his contribution to country and society. TCM philosophy in its development history was influenced deeply by Confucian values. In the history, the doctor profession was for saving people's lives as for a minister saved a country without consideration to earn money. From time immemorial the government officer has been regarded as the best profession in China. For China's talent and ambitious men with good education who wanted to realize their idea to country and society and value in life, but failed in imperial test or were disappointed to the decadent officialdom, they chose to be doctors (Li Junsheng, 2007). 'Can't be a good minister, then be a good doctor' was the popular and mainstream option for men. Moreover, thousands of years passed such values on---- WANT TO EARN PROFIT NOT TO BE A DOCTOR (Cao Zenghuai, 2008, Zhang yi, 2007). Moreover, morality first and embodying morality through excellent quality of medical service, benevolent principles, and the value of retaining the ideal and moral orientation has already melted into the soul of Chinese culture, rooted deeply in Chinese culture values and reflected in every Chinese people daily life (Qu Limin,2008, Li Junsheng,2007; Cao Zenghuai,2008). Since the Qing Dynasty, the doctor was not a respected profession in China society.

Then in 1959, this changed as health professionals were regarded as 'white clothed angels', all health professionals became servants, and their salaries were the same grade with other people who worked in offices. Even in today's Chinese society, the average doctor's salary is just the same or less than other professions with the same education degree. Doctors and nurses became the main powers to shoulder Chinese society's conflictions that were caused by the serious shortage of government investments in healthcare system.

TCM focus on disease prevention become the core value of China hospital management policy. The character of China hospital which the hospital are defined into different function and role through three grades evaluation system to ensure hospital medical service was proved to be an effective strategy to meet the different level needs for local health promotion. These philosophies are coherent with HPH core principles that disease prevent, patient sharing the responsibility of self health protection. Grade I is the community hospitals or health centers, it offers primary health service which includes preventive, medical, health protect and rehabilitation services. Grade II Hospital is to provide integrated health services for several communities which include appointed teaching and training duty for its community's health partners and take on health research tasks for local community people. Grade III hospital is the highest class hospital that takes on the medical scientific research, medical university's teaching duty, training the medical professionals from inferior hospitals, takes charge of several regions special diseases' prevent and treatment

etc. medical service, and it accepts the patients delivered by Grade II hospitals. Through this three grades hospital classification function, the health promotion philosophy that cooperation and community health care service, prevention, education etc are all included into its duty.

#### **4.4 TCM and HPH development**

Today, health has already not been a mere biophysical definition but an integrated conception including a completely well-being status of physical, mental, and social (Ottawa, 1987). However, the development of HPH is limited because lacking of initiative or strong leadership support, The HPH activities most focus on patients' education, few researches relate to evidence-based research, and the comparison research of health promoting hospitals is few. There are few health economies evaluating researches and cost-effective analysis for HPH. Because the quality of medical services decreased as the expenses of medicine and equipment increased, it caused the expenses of healthcare to be passed onto patients. The effects of this tension rapidly and drastically increased conflicts between patients, hospitals, and the health professionals that care for them. As patient satisfaction becomes the core indicator for government to supervise and evaluate hospital service, this means that more modern management systems must be employed.

The culture and value in TCM named as `health for one`, the spirit is to develop self-healing power, and thus TCM theory has the character similar to that of religions that demands people depend on themselves. The core value that TCM theory thinks of that everyone has his own potentialities for living a good life just match the health promotion theory, health promotion has the coherent principle with "health for one" that everyone could be taught the knowledge about the self-healing power. Moreover, TCM also provide many unique methods to prevent and cure people can learn a set of skills to prevent and cure minor diseases from TCM. So many Chinese community hospitals mainly medical service contents are TCM because TCM provide a easy way not only for people or patients to self-protect health, but also for professionals to guide or education patients how to promotion health or maintain health and recover health (Jiang Lisheng, 2008). The value which TCM emphasis is all what future medicine energetically advocates. This feature makes Chinese health care system become the unique health care system in the world which performs two different kind of medical service system.

Although so many factors could influence population health, for example, income, social status, social support networks, education, employment and working conditions, physical environment, social environments, biology and genetics endowment, personal health practices and coping skill, healthy child development and health services (Health Canada, 1998), and it's not easy to assess the effect of health promotion for a hospital and a health care system performance. Comparing with western developed countries which have high expenditure health care system, has more

perfect social management system and more healthy environment, as a developing countries, China only has very poor government finance budget on health to handle with more than 1.3 billion population, moreover, the serious polluted environment and unhealthy social management system engender immense pressure and difficulties for China to improve and protect Chinese citizens' health. However fact is China health policy and strategy can use so little money to protect Chinese people health in such tough environment and over 1.3 billion people. This remarkable health achievement is worth to exploring how China performs its health care system to reach its health promotion goal? Some researchers pointed out that comparing with orient hospital medical service system, the features of health culture and value of west countries health care system are: i) heavily dependent on financial input through the expensive high-tech trained specialists; ii) stressed the very high standard of medical technology; iii) treatment-oriented direction; iv) Concerned about the personal medical services rather than building public health plan (Li and Wang 1995; Wilenski1976).

For western countries, the HPH concept was first proposed in the Ottawa Charter of 1986, however, HPH's core values and philosophy principles had already been developing something similar to it in China for thousands of years. HPH philosophies of prevention and empowerment of patients has been advocated 2000 years ago in a TCM practitioner's handbook, titled: *Inner Canon Huangdi* (Qiu Liming, 2008). The *Inner Canon Huangdi* advocated the value of preventing disease, proposed that wise people should treat disease before disease had developed but not after it has appeared , should manage the problem before it happened, but not when it has been bigger (Inner Cannon Huangdi, BC 99 to 26). According to these views, 'It's a rule that it has been too late, if the disease has been forming then people treat it, or the problem has been existing then people handled it, which is just like digging a well when people feel thirsty '(Inner Canon Huangdi, BC99 to 26. paraphrased). This philosophy was discussed profoundly over one thousand years ago in TCM famous classic book <Serve for Urgent Stepholidine Prescription>( Sun Simiao, 652). Sun Simiao emphasizes on the self-healing power of man for curing diseases and advocated to keep fitness and many of its therapies are employed for enhancing this power, moreover, he emphasized that everyone has his own potentialities for living a good and healthy life, and "health for one" is possible if everyone could be taught the knowledge about the self-healing power (Sun Simiao, 652).

In 2008 WHO annual report, Dr. Chen pointed out that the nature of health problems is changing in ways that were only partially anticipated, and at a rate that was wholly unexpected. The health strategy and principle should consider the health in the years ahead because of the largely unpredictable complex web of interrelated factors which is at work, population, climate change, challenges to food security, and social tensions, etc(2008 WHO ANNUAL REPORT). These situation shows that as the more and more ageing society, the more and more challenged effects

of ill-managed urbanization, the more and more easily spread worldwide transmission of communicable diseases, and more and more heavy burden of chronic and non-communicable disorders, every country government has to develop more integrated and comprehensive health management system to suit the 21 century challenge, people have to consider of HPH theory and principles just match the need of 21 century health care system that not merely consider the individuals present with complex symptoms but also consider the multiple illnesses challenges service delivery and prevention of disease.

## **5 The success and the defect of Chinese hospital management model**

Despite as an undeveloped country, there are a mass of disadvantages factors which can block health promotion developing successfully in China, it can't deny that China has improved the citizen health obviously in recent years. Comparing with western developed country, even though Chinese health promotion development is still lower, however, consider China hard political and complex low socioeconomic developed condition and environment, the serious populated nature environment and undeveloped economy, as well as its enormous 1.3 billion population, China only used \$315 per capita total expenditure on Health to access its basic health promotion goal, this remarkable health achievement deserves to research.

### **Successive experience of China hospital development**

First of all, the value model of Chinese hospital management reflects health promotion policy and principle. Disease prevention first, disease prevention combine with disease treatment is all hospital core work. As one of the main function, the China hospitals have to combine the disease prevention with its clinic treatment. Every hospital, especially Grade III hospital often offers a few times large-scale free public health education activity which includes free disease diagnosis, disease screening and simple treatment consultative, health consultation etc activities. In these activities, people can talk or ask any questions to the doctors or experts face to face in public. This is an economic ways to achieve the goal of health promotion for China hospitals under poor finance budget support, generally it has also can produce quite good social benefit besides spreading the health knowledge. Furthermore, Chinese hospitals also take charge of the routine physical checkup for the community residents to prevent disease and to provide the more early diagnosis and treatment as possible.

Secondly, the application and influence of TCM in China hospital is widely and embedded. Even TCM is more and more spurning by China hospitals' leaders because of lacking economic profit since Chinese hospitals were thrown into marketing in 90s, however, TCM has developed a set of both practical and advanced, universal and thorough, and systematic health care system, which is

notably characterized by simplicity, convenience, affordability, safety, efficacy and effectiveness enormously ease Chinese people from poor health service resource of western medical service.

Thirdly, China hospitals are managed by different grade and classification which improve China health care system performance effective of limitation health resource. Not only the hospital managed by classification, the health professional education, all health service including the professional operation extent are all classified into different grades according to the evaluation standard developed by MHRPC. For example, the health professional education system, it is classified into 5 grades, from low to high are: vocational high school, college, university bachelor, master degree and Ph.D. All professional staffs have to accept the continue education at workplace. Job title decides the task responsibility which directly couple to education degree and work experienced as well as the professional test for job promotion. The job title is classified into four grade.

Chinese hospital management emphasizes the continue profession education in workplace and practice. So China medical university education is far shorter than western countries. Moreover, China health professional education core value is designed according to patients' needs for different degree medical service, for example, the health vocational high schools serves for basic primary health service, especially in undeveloped area( This is a successive experience to handle with health humain resource shortage in poor finance budget, but not a best choice to develop high quality medical service). Medical university education mainly provides the health professionals for Grade II or Grade III hospitals or Grade I hospitals in big city. But now, the low degree health education has been abandon gradually by MHRPC.

Fourthly, MHRPC attaches great importance to evaluate and research the effect of health service performance. Evaluation is the most importance measure for MHRPC local health government to manage and supervise different Grade hospital service quality and performance effect. Each hospital or health institution has to accept at least one times a year (usually over 3 times) different kinds of assessment which is conducted by its department in charge. Through various kinds of evaluations, the different health government can ensure their health care system to run in high cost-effective.

**However, the defects of China health care management is also obvious and serious.**

First of all, the government finance budget critical lack in health care system that drives all Chinese hospitals have to toward “earn money first” value more than “ patient medical service first”.

Since 1985, as China's economic reforms developed fast, western culture and values influenced Chinese society more and more. Chinese society found itself in the middle of a marketing boom that created a lot of business pressures. For Chinese healthcare, there was a lack of government funding, which led hospital management to look for new ways to develop hospital services to survive in a competitive marketplace. The overall effect was one where government influence and interventions on hospital management was dramatically reduced. All Chinese hospitals had to turn towards methods to maximize profits in order to compensate for the huge gap between costs and income even though the government still managed and named them as public non-profit hospitals. Although there still 98% of hospitals were public in 2003 (China Health Statistic, 2007), in fact, all Chinese public hospitals have already become profit organization.

Furthermore, because of the government finance responsibility withdraw, non enough public finance budget support, many necessary free public health service became profit service. Then many people were not able to accept the necessary primary and disease prevention service. So China disease prevention and emergency responsiveness system were weakened especially in rural areas by natural disasters and overall effects of China's economic reforms. The spreading trend of some major diseases, such as HIV/AIDS, has not been effectively controlled; chronic non-communicable diseases and injuries becomes the main cause of death and disability. Even China current health reform promised that China government will sustain MHRPC to provide free public primary health service to all Chinese people, but how to perform this plan and who share the finance responsibility and how to supervise it implementation still in exploration.

Secondly, China health resource distribution is serious unfair, especially the specialist medical service. A small part people who have the privilege cost 70% public medical expenditure, most resources are deployed in big cities and large hospitals which cost China most health finance budget focus on a few big cities. Some Chinese hospitals possess the top advanced medical equipments in the world, the hospital environment can compare with the five star hotels in few big cities. But for many village undeveloped areas, they even has no any health resource, no health institution.

China has had to increase resources for the health sector and to ensure that the limited resources available are used efficiently to increase the access to essential health services for the rural population. Moreover, China should support more effective community health services and control the health providers at public sector facilities to save money that can be reallocated to rural populations. Some of this funding might need to be raised by increasing healthcare fees to urban users of healthcare.

China needs to develop a composite health promoting hospital which complete follow the HPH strategy and principles to achieve its goal of new health reform. However, up to now, there is not international hospital assessment instrument translated into Chinese followed by cross-culture



research and reliability and validity test. Few researches refer to international hospital evaluating system under a cross-culture standards research. This research not only first time develops a Chinese Version of the WHO self-assessment tool for HPH but also performed a complete cross-culture international instrument research. This research developed a Chinese vision WHOSATHPH that not only great helps to uphold health promotion developing in China hospital but also lays the foundation for the further research of health promotion development and evaluation in hospital. Furthermore, this research not only provides an experience to China to build up international health value system in developing its hospital service base on current system but also help to encourage international hospital management exchange.

## **6 Limitations and Biases of this Research**

Because it is exploratory research, and limited by finances, this research had to adopt non-probability sampling. Moreover, this research sampled three provincial capital cities, 16 hospitals and 40 hospital leaders and 2 health management professors. Even according to China hospital management model, the hospital sampling can stand for the local health promotion develop level, however, it is not a big enough sample size to generalize results and the conclusion. All the hospitals are public hospital, no private hospital leaders were investigated in this research.

Moreover, in this research, internal-consistency measures were used the general scale reliability analysis method to evaluate by means of Cronbach's Alpha. Chinese Vision WHOSATHPH includes all questions of source instrument, but as a valid and reliability test survey, only the items with scale measure were asked for filling, the others part, such as compensation questions and action plan as well as the addition items which fit the local situations were not asked for given, because this information ask use language description refers to future plan or action plan, didn't related to the reliability of instrument. However, the respondents' personal information, such as sex, profession, education, time on management work, feeling on workload of this investigation and the comment to this instrument's role were obligation information that the respondents were asked for filling completely in survey. The basic information of the hospital, name, public or private, grade, and size were obligation information to given, the income and workload as optional given information. Therefore, this research method may cause the results of conclusion bias if it is reported as a universal finding.

Secondly, the test-retest reliability surveys were conducted at intervals of only three days, though we controlled the procedure so that respondents could not review the questionnaire after the first time that they took the survey, however, three days interval might cause a result bias because of memory of the first testing.

Thirdly, although hospital leaders were told that this survey was just for research intentions and completely private and not for the government, their results completely respected the identity of respondents and the hospital. However, inasmuch as the procedure was reported to respondents so as not to put their jobs at risk, hospital administrators may still regard the results as to not be tainted by reporting bias.

## **7 The future research direction**

Contandriopoulos A.P. pointed out that value, belief and history found the basic health environment culture, which are the most important factors to influence the health system's performance, though the social economy, politic policy and health professionals etc are the key factors that impact health result (Contandriopoulos A. P.,2003). Martin McKee and Judin Healey pointed out that to study a hospital should be from different system levels and an individual hospital research should be considered within the wider hospital system, within a country's health care system and, even within the broader socioeconomic and political environment. (Martin McKee and Judin Healey,2002). HPH provides an integral strategy in hospital management for hospital developing.

Although this research developed a reliability Chinese version WHOSATHPH, nevertheless, over one of third respondents thought this instrument is too abstract to be followed in practice work. And their suggestions to this research are: develop this WHOSATHPH instrument which could combine with MHRPC hospital evaluation system and be more easy to operate in daily work. So the future research plan is increase the operation of this instrument which is not only for self-assessment but also for supervising and evaluating the health promotion level and effect for the governor and health administration institution. In addition, this Chinese version WHOSATHPH in this research doesn't show high validity through factor analysis result, and sampling size is too small and not use random sample. To improve the instrument validity, reduce subjective bias and further explore the reason that different raters equivance show different result, for example, some hospital show comment equivalence but some hospital not, the separation phenomena of HPH evaluation indicated the random quantitative investigation necessary. So, it is necessary to increase the sample size and combine the random sample together with the non-probability sample to conduct a quantitative and qualitative investigation and analysis in the future research.

This research just give a primary analysis in a limited small sample size to profile China hospital feature and manage model. Even MHRPC has get some successful experience to high effective hospital management, however, a series of weakness of China health care system and its challenges to MHRPC force China to carry on new turn health reform, and the public hospital reform become the biggest bottleneck and challenge. From another side, China past and current success experiences should be aroused by western developed countries which have very high

health expenditure to think over the defect of the culture and value that ` treatment center ` medical service model. So the further research will focus on further explore the value and influence of HPH to develop more perfect and high effective health care system.

## **Conclusion**

This research is to Develop a Chinese Version of WHO Self-Assessment Tool for Health Promotion in Hospital and test the reliability and validity of the new self-assessment tool. In the same time, to provide a primary description and analysis of the current China HPH situation through the investigation results of this Chinese version WHOSATHPH, discuss China current hospital management model and evaluation stands , analysis the value and culture of TCM and its role and influence to China HPH development.

The study developed a Chinese cersion WHO Self-Assessment Tool for Health Promotion in Hospital. Moreover, it first adopted complete cross-culture procedures to develop an international instrument. And test its reliability and validity, a pilot test was performed in Canada (Montréal) and a spot field investigation was implemented in three core capital cities in China. This research adopt completely cross-culture approach to develop an international instrument for HPH evaluation which includes:translated the source English edition tool into Chinese, then back translated it into English. Either the translator or backward translator both are Chinese-English bilingual professionals in public health to ensure the quality of translation. The backward translation was evaluated to the content equivalence by three health professionals which include a native American, a health evaluation professor and the author of WHOSATHPH. Only 1 of 40 items was marked as different with original version because different culture and context of the word < Satisfy >. The test and evaluation result shows that the translation qualities of back translation version has high content equivalence with original instrument.

To test the reliability and validity, 8 Chinese health professionals who work in Montreal health organizations were interviewed to complete the pilot test. Only one respondent thought the instrument was difficult. Then a spot field investigation was performed in three Chinese core capital cities, Shanghai, Hefei and Kunming from June to August 2008. This research adopted non-probability sampling to select the hospitals which not only covered all grades of hospitals and functionality but also covered the most advanced developing hospital for local health promotion . All the hospital leader volunteer to accept this investigation and interview and to give their true comments. The three capital cities stood for different levels of economic development and different cultural and ethnic features in China. 22 China hospitals which stood for local top health promotion level hospitals were investigated. 40 hospital leaders and 3 hospital management researchers or officersl were investigated or interviewed. Besides of the questionnaire survey, most hospital leaders also accept a deep interview about their opinions to WHOSATHPH. in this research, the qualitative data was collected through deep interview

combined with the questionnaire investigation that recorded the hospital leaders' opinion to their hospital in HP developing status. All the respondents were voluntary to take part in the first survey and the repeat survey after 3-7 days if they would like to. Reliability analysis include internal consistency(Cronbach Alpha),inter-rater reliability(Correlation analysis),Test-retest reliability( Paire-Sample T-test), Validity Test through factor analysis and Pearson Bivariate Correlations analysis. NPAR test was used to analyze the different cities and different grade hospitals comparison.

Reliability measures utilized Cronbach's Alpha, and for the total items of this instrument the coefficient was 0.938, and between the domains Cronbach's alpha values were 0.896. The Cronbach's alpha for five standards from stand one management policy to standard five continuity and cooperation were: 0.793, 0.819, 0.807, 0.785, 0.755. This high Cronbach's alpha coefficient might concern with the number of instrument items. Pair T-Test for 40 items between pre and post test, the signification p was from 0.1-1. The result for Pair T-Test shows that there were no significant statistical differences between test and repeat test values for every item. 8 groups data were used for Inner-raters analysis, result shows that Shanghai respondents had comment consistency but Hefei and Kunming respondents didn't show inner raters assessed consistency. Factor analysis results show that Chinese Vision WHOSATHPH has a general construct validity, for the factor analysis matched the general theory construct validity but don't match the domain level construct validity. 5 standards were extracted one principle component which contributes 69.6% of total information, 13 domains were extracted five principle components which contribute 83.8% conception information of the total. However, the 13 domains with their standards don't have clear conception. The results show that this Chinese version WHOSATHPH is high reliable but only has general construct validity and its validity is not high. The inner raters evaluation to Chinese version WHOSATHPH shows that Shanghai hospitals showed equivalent results, but another one Hefei hospital leaders and three Kunming hospitals leaders didn't show well evaluation equivalence.

The results showed that Chinese version WHOSATHPH has high internal consistency but the high Cronbach's Alpha might concern to the number of items.

Although 43 hospital leaders and hospital management researcher thought this research is valuable, 35 hospital leaders who answered the acceptance question, there are 15 hospital leaders and 2 hospital administration researchers refused to use WHOSATHPH in their work or

accept this WHOSATHPH, 17 hospital leaders and one health ministry governor will accept to use WHOSATHPH in their work, 3 hospital leaders were not sure to use WHOSATHPH. Most of the hospital leaders refused to use WHOSATHPH with the same or similar reasons even they were in different cities and work for different grade hospitals. The reject reasons were: no government financing budget support was available, there was no demand from the government and it was difficult to follow. The reasons for accepting it were: help to improve the work quality and help to guide HPH development. This research result shows that the Chinese version has reliability and general construct validity, but its validity needs the further conceptual and empirical research to prove.

China's current healthcare system and national health policy is a unique system founded on a dual approach that combines TCM (as a national health policy) together with western medical models. Because of this hospital management model, China's health system has some special cultural and value features in both hospital medical services evaluation and management. This research proposed that the special value features of China health care system that disease prevention first, patient-center, combined the TCM with west medicine, and emphasize hospital role in public health promotion are the successive strategies for MHRPC to develop health promotion in very poor finance support, difficult social conditional and polluted environment. This research provides practitioners and administrators with a tool that may be used in Chinese hospitals and treatment centers. To provide a primary description of China current HPH development by using this Chinese version WHOSATHPH and to discuss China current hospital service evaluating principle and management model, moreover analysis the value and culture of TCM and its role and influence to China HPH development, this research particularly chose three capital cities(Shanghai, Kunming, and Hefei) which stand for different economic development level and different culture context feature but all deep influenced by TCM were investigated.

In this study, Kunming hospital leaders gave more higher health promotion score mean to their hospital, followed by Hefei hospital leaders. Even Shanghai obtained the highest health promotion result in China, and Shanghai government ministry force Grade I and II hospitals to perform HPH, the hospital leaders didn't give more high HP score than Kunming and Hefei. Different Grade hospitals didn't show statistic significance difference, means the big super teaching hospitals didn't show better health promotion result than small hospital or community hospitals in China in this research. The self-assessed score mean that showed HP development degree of Chinese hospitals in this research is quite higher, the cooperation domain and healthy work place get better

score, the hospital management and policy got the lowest score. The five standard scores' mean from the highest to lowest were, standard5 (continuity and cooperation) 28.95(72.4% of full score), and so forth were: standard4 (healthy workplace) 35.71(71.4%), standard3 (patient information and prevention) 21.34 (71.1%), standard2 (patients assessment) 23.85 (68.1%), standard1 (management and policy) 28.17(only 62.6% of full score). The assessment score mean of different grade hospital were: Grade III (n=21)  $154.19 \pm 7.34$ , Grade II(n=9)  $158.67 \pm 10.7$ , Grade I (n=11)  $144.82 \pm 14.54$ . Variance analysis result shows that there was no statistic signification difference between different grade hospitals. This result shows that China big hospitals has the similar HPH development level with small hospitals. This result is different with Oliver Groene research that he thought big hospitals have better health promotion level.

Chinese Traditional Medicine acts an important core role in China primary health system and Chinese people daily life. The culture and value `health for one` in TCM has same value with health promotion principle that emphasized patients role in health promotion in medical service. Moreover, the core value that the disease prevention is coherent with disease treatment in Chinese health management policy provide an effective and successive experience to develop HPH. This thesis discussed the quality and weakness of China health care system and its successive strategies to develop HPH in very poor finance support, huge population, and difficult social condition and polluted environment. Disease prevention first, patient-center, combined the TCM with west medicine are regarded as the successive strategies for China HPH development. However China also exists some serious weakness to develop more effective health promoting hospital, the poor government finance budget support on health care system, the serious unequilty health rource distribution and the over marketing ori entation hospital management etc negative factors.

This Chinese vision WHOSATHPH offers an international evaluating tool for China hospitals to practise HPH and it also provides an international exchange tool for hospital service managers. This tool helps assure that organizations follows sound principles that are culturally sensitive as well as based upon components of established HPH models, it created a foundation for the future research on developing health promotion effectively in Chinese hospital. However, this research just finishes a primary exploration research for evaluating Chinese hospitals health promotion. Further research is necessary that to combine this Chinese version WHOSATHPH instrument with MHRPC hospital evaluation standard system which to develop a more higher validity instruement which can be easy to operation in realility work, and not only for self-assessmen but



also for supervision. In addition, the further research is necessary to increase the sample size and combine the random sample together with the non-probability sample to conduct a quantitative research and qualitative analysis in future research and further explore the value and influence of HPH to develop more perfect and high effective health care system.

In a word, this Chinese vision WHOSATHPH created a foundation for Chinese hospital to develop health promoting hospital and help to international HPH development exchange.

## **The Pictures of Spot Field Investigation**

### **Sampling Chinese Hospitals**

## Environment OF China Hospitals

Shanghai Grade III hospitals:

The environment and medical technique and equipment condition can stand for most Grades 3 hospital which are the best development in China.



Zhongshan teaching Hospital, one of the most famous G3 hospitals in China

The sixth People Hospital, one of the most special hospitals in China

Jingshan hospital, developing very fast hospital in Shanghai

The hospitals inner environment





Yunnan Kunming Best Grade III Hospitals



Anhui Hefei Best Grade III Hospitals



A good Shanghai Civil Public hospitals (Grade II)



A good Kunming Grade II Hospital





Shanghai Community hospitals





Education center in community hospital



Hefei Best Community Hospital



Hefei Healthcare Center for Governors



## The spot of Investigation in China



Kunming hospital document record for Health promotion



Kunming hospital Management Regulation



The pictures recorded a cancer educational activity, offered by the Teaching Hospital (Grade III) of Kunming Medical University.

This picture shows that Chinese Grade III hospital provide disease screen and prevention service as well as public



Kunming hospitals leaders are filling the questionnaire



A Kunming Grade III hospitals vice-president is filling the questionnaire



The director of Ministry of Health of Xuhui District Shanghai, was accepting my deep interview about his opinions to HPH and WHOSATHPH

Three famous Chinese hospital administration professors were accepting my deep interview to talk about their opinions about HPH and WHOSATHPH.



The hospital leaders were filling the questionnaire



## The China University Professors

Who helped me finish this spot field investigation in China hospital



Professor Fu Hua (took on blue shirt) hold a meeting of some Shanghai hospital leaders and managers, a health management professor and



Professor Chonghua Wang, vice president of Public Health School, Kunming Medical University



Anhui Medical University Health Administration college master students

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Commenters: Tim Kavi, Farand Lambert, Oliver Groene

# Appendix

世界卫生组织健康促进医院自评量表中文版  
Chinese Vision WHO Self-Assessment Tool  
for Health Promotion In Hospital

加拿大蒙特利尔大学卫生管理系  
上海复旦大学公共卫生学院  
联合研制

2008

## 世界卫生组织健康促进医院自评量表(中文版)

填表说明:

填写本表需要您熟悉医院管理的基本知识,了解健康促进、健康促进医院的概念和内涵。如果您对健康促进、健康促进医院等基本概念不熟悉,我们在此表最后为您准备了两个附录的相关介绍,您先阅读附录的有关健康促进医院的介绍以及加拿大健康促进医院自评标准后,填写此表会更有利、更容易。世界卫生组织健康促进医院自评量表中文版分五大项标准,每项指标通过“完全做到、大部分做到、做到一半、做了一点、一点没做”5个等级测量医院在多大程度上完成了指标要求的内容。同时设立了“不知道”供不了解情况时选择。

例如:标准一管理政策第一条

1.1.1	医院提出包含健康促进内容的目标和使命。 (证据:例如检查有关健康促进活动的行动时间表)	全部做到	做了大部分	做到一半	做了一点	一点没做	不知道
		5	4	3	2	1	0

如果医院不仅制定健康促进的目标而且切实采取行动实现目标,有明确的有关文件证明,提供有效的、形式多样的行动方案并有执行时间表,那么就选“5--完全做到”;如果有明确目标使命及其行动方案但不完善或形式单一选“4--做到大部分”;仅有明确目标或仅有行动方案选“3--做了一半”;仅有不明确的目标或仅有不完善的行动方案选“2--做了一点”;什么都没有做选“1--一点没做”;如果对此方面的情况不了解,选“0--不知道”。每个选2以上的条目,均需要对你所做的工作在“评议”一栏里进行说明。评议主要是针对你的选择答案进行说明。比如,上述选项,如果你选了5—全部做到,那么你解释关键的理由,必要时,对此条目和你们的工作进行评论解释。如果没有全部做到,就重点介绍和标准比较的差距在哪里。添加评议说明的目的是帮助医院决策者了解医院健康促进工作的进展情况,为领导今后工作的开展方向提供依据。为了更好地帮助医院创建健康促进的法人团体,该量表还预留了补充条目空间,供各个医院发展适合本地、本部门的特殊指标。

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如果有任何疑问,欢迎联系:周凤琼 email: zfqyumin98@gmail.com

希望我们的努力得到您的支持和帮助!再次感谢您的大力支持和合作!

中文版世界卫生组织健康促进医院自评量表研制小组

蒙特利尔大学卫生管理系

复旦大学公共卫生学院

2008-6-19

附表一（没有的数据可以不填）

Side-questionnaire 1(No answer if you don't know)

医院名称 \_\_\_\_\_ : \_\_\_\_\_

---

年收入 \_\_\_\_\_ 元 花费 \_\_\_\_\_ 元

所在城市: \_\_\_\_\_ 省

所在区域人均GDP \_\_\_\_\_ 人均卫生花费 \_\_\_\_\_

医院属性: \_\_\_\_\_ 级 \_\_\_\_\_ 等 \_\_\_\_\_ 公立: 部属  省属  市属  民营

床位数: \_\_\_\_\_ 张 年均住院病人人数 \_\_\_\_\_

\_\_\_\_\_ 年均出院病人人数 \_\_\_\_\_

开始创建健康促进医院时间 \_\_\_\_\_ 年 \_\_\_\_\_ 月

**世界卫生组织健康促进医院自评量表(中文版)**  
**WHO Self-Assessment Tool For Health Promotion in Hospital**

**自评工作的责任要求:**

自评工作的责任应该形成文件。

要有一个人统筹此项工作（项目经理）。

根据医院的组织结构和所能够提供的人力资源情况进行自评。

各标准的自评责任可以分散到各有关部门承担，如由高级管理人员承担管理政策和健康促进持续性和合作性方面的自评，而其他标准部分的自评工作由临床医务人员负责。

每一个参与自评的工作人员都应该签署同意书以确认他们愿意收集数据或监测数据的收集。

医院健康促进的行动计划应该经过专家指导小组讨论制定。

须由医院负责健康促进的项目经理批准这个行动计划并为计划的执行提供方便。

行动计划需要向管理层介绍。

项目总负责

（负责整个自评过程并负责介绍结果）

姓名:

职责:

时间: 年 月 日

签名:

指导小组成员Name Department Title/ Profession/

姓名	科室	职务	专业

Function Discipli

负责标准一的项目责任人：管理政策

姓名：

职责：

时间：     年     月     日            签名：

负责标准二的项目责任人：患者评估

姓名：

职责：

时间：     年     月     日            签名：

负责标准三的项目责任人：患者的信息和干预

姓名：

职责：

时间：     年     月     日            签名：

负责标准四的项目责任人：促进健康工作环境

姓名：

职责：

时间：     年     月     日            签名：

负责标准五的项目责任人：连续性和合作

姓名：

职责：

时间：     年     月     日            签名：



### 标准一 管理政策 (Management Policy)

医院已制定健康促进的政策。医院健康促进的政策是整个质量促进体系的一部分，目的在于提高医院整体的健康保障水平。

医院的健康促进政策面向患者及其亲属以及医务人员。

目标:

为医院描述有关健康促进的活动框架，使有关健康促进的活动成为医院质量管理体系的有机组成部分。

标准

编号	标 准						
1.1	医院为创建健康促进医院制订明确的目标和责任。						
1.1.1	医院提出包含健康促进内容的目标和使命。 (证据：例如检查有关健康促进活动的行动时间表)	全部做到	做了大部分	做到一半	做了一点	一点没做	不知道
		5	4	3	2	1	0
评议:							
1.1.2	在过去一年里，医院重申参加世界卫生组织健康促进项目并签署协议书。医院管理层的会议记录有上述内容的记载。 (证据：例如决定参加世界卫生组织健康促进项目的日期或交付年费的日期)	全部做到	做了大部分	做到一半	做了一点	一点没做	不知道
		5	4	3	2	1	0
评议:							
1.1.3	医院目前所制定的质量和运营计划包含了健康促进的内容（面向患者、职工和社区服务）。 (证据：例如医院的行动计划里含有明确的健康促进的内容)	全部做到	做了大部分	做到一半	做了一点	一点没做	不知道
		5	4	3	2	1	0
评议:							

1.1.4	医院指定专人专职负责健康促进的协调工作 (证据: 医院任命职工负责健康促进工作的协调)。	全部做到	做了大部分	做到一半	做了一点	一点没做	不知道
		5	4	3	2	1	0
评议:							
1.2	医院为健康促进的实施调配资源。						
1.2.1	医院设立专项预算确保健康促进服务的顺利开展, 并保障其所需物资。 (证据: 例如检查财务预算和人力资源)	全部做到	做了大部分	做到一半	做了一点	一点没做	不知道
		5	4	3	2	1	0
评议:							
1.2.2	各临床科室都能提供体现健康促进原则的操作指南或临床路径 <sup>3</sup> 上有相应的健康促进活动。(证据: 比如检查工作指南)	全部做到	做了大部分	做到一半	做了一点	一点没做	不知道
		5	4	3	2	1	0
评议:							
1.2.3	医院为健康促进项目的顺利实施配备专门的机构和设备, 包括资源、空间、设施。这些机构和设施有清晰醒目的标识(证据: 例如有患者专用电梯)	全部做到	做了大部分	做到一半	做了一点	一点没做	不知道
		5	4	3	2	1	0
评议:							
1.3	医院为监测健康促进活动的质量采取措施确保数据收集和评估工作的顺利开展。						

<sup>3</sup> 临床路径 (Clinic Pathway) 是以病种/病例为对象, 临床多专业人员共同合作, 通过标准化、综合多学科的医疗质量控制所做的最适宜、有顺序和时限要求的医疗照顾计划。

1.3.1	医院在实施健康促进干预措施期间定期采集数据，并且职工能获取这些数据评估健康促进活动的质量。（证据：职工能在调查中能获取评估数据）	全部做到	做了大部分	做到一半	做了一点	一点没做	不知道
		5	4	3	2	1	0
评议：							
1.3.2	医院建立了健康促进活动质量评估程序（证据：例如能提供调查时间表）。	全部做到	做了大部分	做到一半	做了一点	一点没做	不知道
		5	4	3	2	1	0
评议：							

### 管理政策 (Management Policy)

#### 补充指标

了解健康促进政策的职工占全体职工的百分率\_\_\_\_\_%

了解健康促进标准的患者（及其亲属）占全体患者的百分率\_\_\_\_\_%

拨给参与健康促进活动的职工的专项财政预算占全部财政预算\_\_\_\_\_%

#### 额外指标（可能要考虑的地方行动计划里的指标）

标准一：管理策略

行动计划

方 面	行 动	责 任	时间安排	预期结果
一般基准				
1. 1				
1. 2				
1. 3				

## 标准二 患者评估 (Patient Assessment)

医院确保医务人员在临床实践中建立与患者的合作伙伴关系，医务人员能系统地评估患者健康促进活动的需要。

### 目标

支持对患者的临床治疗，改善病人预后并促进患者的健康和幸福感。

### 标准

编号	标 准						
2. 1	医院采取措施确保所提供的服务满足所有患者健康促进的需要。						
2.1.1	医院向患者提供以下指南：吸烟、饮酒、营养，以及有关心理--社会--经济状态的健康教育。 (证据：例如检查资料的易获取程度)	全部做到	做了大部分	做到一半	做了一点	一点没做	不知道
		5	4	3	2	1	0
	评议：						
	2.1.2	医院的各项操作指南/操作规程在过去一年内经过修订。 (证据：例如审查修订日期、负责修订指南的人员)	全部做到	做了大部分	做到一半	做了一点	一点没做
5			4	3	2	1	0
评议：							
2.1.3	医院向某些特定的患者群 (如哮喘患者、糖尿病患者、慢性阻塞性肺病患者、手术患者，康复患者等) 提供认识自己健康促进需要的指导手册。(证据: 例如检查在临床科室里接受专科治疗的患者)	全部做到	做了大部分	做到一半	做了一点	一点没做	不知道
		5	4	3	2	1	0
评议：							
2.2	医务人员在患者首诊时就评估其健康促进的需要，并根据患者临床条件的变化和患者要求随						

	时进行必要的补充和改进。						
2.2.1	在患者入院时就将其健康促进的评估资料放进病历。 (证据：检查病历)	全部做到	做了大部分	做到一半	做了一点	一点没做	不知道
		5	4	3	2	1	0
评议：							
2.2.2	医院提供患者出院时或临床干预结束时复测患者健康促进需要的操作指南或程序。(证据：检查现有的操作指南)	全部做到	做了大部分	做到一半	做了一点	一点没做	不知道
		5	4	3	2	1	0
评议：							
2.3	医院对患者健康促进需求的评估结果和其他人提供的信息吻合，并可敏感地反映患者的社会和文化背景。						
2.3.1	转诊患者的病历记录里有转诊医生的评估意见或其他相关信息的记录。(证据：例如所有转诊患者病例记录里的医生转诊意见)	全部做到	做了大部分	做到一半	做了一点	一点没做	不知道
		5	4	3	2	1	0
评议：							
2.3.2	患者的病案恰当地记录病人的社会和文化背景。(证据：例如 记录宗教要求的特殊膳食或其他特殊注意事项，能反映患者健康风险的社会条件。)	全部做到	做了大部分	做到一半	做了一点	一点没做	不知道
		5	4	3	2	1	0
评议：							

## 补充指标

接受一般疾病危险因素评估的患者占全部患者的比例\_\_\_\_\_ %

根据指南，接受了特殊疾病危险因素评估的患者占全部患者的比例\_\_\_\_\_ %

患者对评估过程满意度的调查分数

**额外指标**（可能要考虑的地方行动计划里的指标）

## 标准二：患者评估

## 行动计划

方 面	行 动	责 任	时间安排	预期结果
一般基准				
2. 1				
2. 2				
2. 3				

### 标准三 患者信息和干预 (Patient Information and Intervention)

医院能向所有患者提供与他们疾病或健康相关的重要资料，并且在各个临床路径阶段都建立了健康促进的干预措施。

#### 目标

医院确保患者了解将要开展的各项活动计划，赋予患者在活动中享有积极的合作伙伴关系，并为所有病人各个临床路径中实施一体化的健康促进活动提供便利。

#### 标准

编号	标准						
3.1	基于对患者健康促进需求评估的结果,告知病人影响他们健康的因素,和病人建立合作伙伴关系,有关健康促进的活动计划征得患者同意。						
3.1.1	患者的病例记录里记载所提供患者的信息。 (证据:从所有病例中随机抽取部分患者的病案进行回顾)	全部做到	做了大部分	做到一半	做了一点	一点没做	不知道
		5	4	3	2	1	0
评议:							
3.1.2	患者病案里记录和评估了健康促进的活动及其预期结果。(证据:例如审查患者的病案)	全部做到	做了大部分	做到一半	做了一点	一点没做	不知道
		5	4	3	2	1	0
评议:							
3.1.3	医院已实施评估患者对所给信息的满意度 <sup>4</sup> 的调查,并且评估结果已融入医院的质量管理体系。(证据:检查医院采取的各种评估方法:调查、核心小组采访、问卷调查、时间安排)	全部做到	做了大部分	做到一半	做了一点	一点没做	不知道
		5	4	3	2	1	0

<sup>4</sup> 患者信息满意度评估 (Patient Satisfaction Assessment of the Information):指患者对医院提供的各种健康教育资料、开展的活动,所提供的内容、形式等方面的满意度。



	评议:								
<b>3.2</b>	医院确保所有患者、职工和探视人员都能方便地获取有关健康影响因素的科普知识。								
<b>3.2.1</b>	医院提供有关健康的科普知识。 (证据: 例如检查医院提供的印刷品或网络信息或专用信息栏)	全部做到	做了大部分	做到一半	做了一点	一点没做	不知道		
		5	4	3	2	1	0		
	评议:								
<b>3.2.2</b>	医院提供有关高发/高危疾病的详细信息。 (证据: 如提供印刷品或网络信息或专门的信息栏)	全部做到	做了大部分	做到一半	做了一点	一点没做	不知道		
		5	4	3	2	1	0		
	评议:								
<b>3.2.3</b>	医院向患者协会等类似病人组织提供信息服务。(证据: 医院能提供他们的联系方式、地址)	全部做到	做了大部分	做到一半	做了一点	一点没做	不知道		
		5	4	3	2	1	0		
	评议:								

## 标准三： 患者信息和干预

## 指标

接受自我健康管理（适合患者自身情况）特别行为培训的患者占全院患者的百分率

%

接受适合自身情况的自我健康管理培训（包括改变疾病危险因素，如何选择疾病治疗方案等方面的教育）的患者占全体患者百分率      %

调查分数（调查患者获取信息和接受干预的体验）

**额外指标**（可能要考虑的地方行动计划里的指标）

## 标准三： 患者信息和干预

## 行动计划

方 面	行 动	责 任	时间安排	预期结果
一般基准				
3. 1				
3. 2				

## 标准四 促进健康的工作环境（Promoting a Healthy Workplace）

医院领导层为发展健康安全的医院工作环境创建各种有利条件。

目标

医院支持健康安全工作环境的发展，支持职工的健康促进活动。

标准

编号	标 准						
4.1	医院确保发展和实现健康安全的工作环境。						
4.1.1	医院的各项工作条件符合国家和地区颁布的标准及条例。(证据：符合公认的国家标准或国际（欧洲）标准)	全部做到	做了大部分	做到一半	做了一点	一点没做	不知道
		5	4	3	2	1	0
	评 议：						
	4.1.2	职工遵守健康与安全的操作标准和要求，所有工作环境的危险因素都被醒目、清晰地标记。 (证据：检查工伤的统计数据)	全部做到	做了大部分	做到一半	做了一点	一点没做
5			4	3	2	1	0
评 议：							
4.2	医院制定和实施全面、综合的人力资源发展策略，包括培训和发展职工健康促进的技能。						
4.2.1	新职工的上岗培训内容包含了医院的健康促进政策。 (证据：例如面试新职工)	全部做到	做了大部分	做到一半	做了一点	一点没做	不知道
		5	4	3	2	1	0
评 议：							

4.2.2	所有科室的职工都了解医院健康促进的政策及内容。 (证据：提供健康促进项目的年终绩效评估或职工参与活动的评估)	全部做到	做了大部分	做到一半	做了一点	一点没做	不知道
		5	4	3	2	1	0
评	议：						
4.2.3	医院设有包含健康促进内容的绩效考核制度和职业继续教育制度。(证据：审查职工档案或采访职工等)	全部做到	做了大部分	做到一半	做了一点	一点没做	不知道
		5	4	3	2	1	0
评	议：						
4.2.4	由多学科专家小组 <sup>5</sup> 发展医院的临床实践操作指南和操作规程。(证据：检查操作规程和职工)	全部做到	做了大部分	做到一半	做了一点	一点没做	不知道
		5	4	3	2	1	0
评	议：						
4.2.5	职工参与管理决策、工作审计和检查评估。(证据：例如调查职工，检查工作小组会议纪要里职工代表的参与情况)	全部做到	做了大部分	做到一半	做了一点	一点没做	不知道
		5	4	3	2	1	0

<sup>5</sup> 多学科小组 (Multidisciplinary Teams) :指由不同专业背景的人员组成的小组，如国内的医疗质量管理委员会就属于多学科工作小组。

	评 议:								
<b>4.3</b>	医院确保采取有效措施培育职工的健康意识。								
4.3.1	医院制定相关政策鼓励职工了解健康观念。（证据： 检查吸烟、饮酒、物质误用和参加体育活动的相关政策）	全部做到	做了大部分	做到一半	做了一点	一点没做	不知道		
		5	4	3	2	1	0		
	评 议:								
4.3.2	提供戒烟项目。 （证据：例如有可供使用的活动和方案）	全部做到	做了大部分	做到一半	做了一点	一点没做	不知道		
		5	4	3	2	1	0		
	评 议:								
4.3.3	实施年度职工调查，内容包括个人行为的评估，对健康促进支持性服务和政策的了解、开研讨会交流健康促进活动的情况。（证据：检查所使用的职工调查问卷及调查结果）	全部做到	做了大部分	做到一半	做了一点	一点没做	不知道		
		5	4	3	2	1	0		
	评 议:								

## 标准四： 促进健康的工作环境

## 补充指标

职工吸烟率            %

职工停止吸烟率\_\_\_\_\_ %

职工对工作环境的评分

职工短期缺席率        %

职工工伤百分率        %

倦怠量表测评职工疲劳的分数

**额外指标**（可能要考虑的地方行动计划里的指标）

## 标准四： 促进健康的工作环境

## 行动计划

方面	行动	责任	时间安排	预期结果
一般基准				
4.1				
4.2				
4.3				

### 标准五 持续性和合作性 (Continuity and Cooperation)

医院有计划地持续地与其他卫生服务部门和机构开展合作。

目标

医院确保和有关卫生服务机构的合作顺利开展，通过合作关系使患者临床路径各个阶段一体化的健康促进活动达到最优化。

标准

编号	标 准						
5.1	医院确保健康促进服务符合当前的卫生资源供应水平，并且和区域卫生政策、规划协调一致。						
5.1.1	医院管理层考虑当地的卫生政策和规划。 (证据：医院领导层会议记录里有关于规章制度和资源供应的讨论)	全部做到	做了大部分	做到一半	做了一点	一点没做	不知道
		5	4	3	2	1	0
评议：							
5.1.2	医院管理层能提供和医院建立合作关系的各个卫生机构及社会福利机构的名单。 (证据：例如检查名单的更新情况)	全部做到	做了大部分	做到一半	做了一点	一点没做	不知道
		5	4	3	2	1	0
评议							
5.1.3	医院内部各科室之间、医院与其他医疗机构之间的协作建立在执行区域卫生规划的基础上。 (证据：例如检查医院工作和区域卫生规划的一致性)	全部做到	做了大部分	做到一半	做了一点	一点没做	不知道
		5	4	3	2	1	0
评议：							

5.1.4	医院制订书面的合作计划，确保与合作者协作共同促进患者护理的连续性。 (证据：例如检查入院标准和出院计划)	全部做到	做了大部分	做到一半	做了一点	一点没做	不知道
		5	4	3	2	1	0
评议：							
5.2	医院确保所实施健康促进活动的实用性和操作性，使门诊病人在就诊期间或患者出院后仍然能参与健康促进活动。						
5.2.1	医院对门诊病人、转诊病人、出院病人（及其关系紧密的家属）提供通俗易懂连续的健康护理指导。(证据：评估患者的满意度)	全部做到	做了大部分	做到一半	做了一点	一点没做	不知道
		5	4	3	2	1	0
评议：							
5.2.2	所有与患者相关的信息医院之间的都有规范的交流程序的协议。（证据：检查已制定的程序）	全部做到	做了大部分	做到一半	做了一点	一点没做	不知道
		5	4	3	2	1	0
评议：							
5.2.3	转出医院及时地给予转入医院关于患者情况、健康需要、所实施的干预措施等方面情况的书面的转诊小结。 (证据：提供书面小结复印件)	全部做到	做了大部分	做到一半	做了一点	一点没做	不知道
		5	4	3	2	1	0
评议：							



	5.2.4	在适宜情况下，患者病历里的康复计划应记录医院及其合作者的作用。（证据：例如回顾病历）	全部做到	做了大部分	做到一半	做了一点	一点没做	不知道
			5	4	3	2	1	0
	评议：							

## 补充指标

寄发出院小结\_\_\_\_\_ %：两周内向一般患者、患者转入医院的门诊寄发出院小结，或在患者出院时交给患者出院小结。

日间护理敏感条件<sup>6</sup>的患者5天内再入院率\_\_\_\_\_ %

患者出院准备的调查分数

**额外指标**（可能要考虑的地方行动计划里的指标）

## 标准五：持续性和合作

## 行动计划

方 面	行 动	责 任	时间安排	预期结果
一般基准				
5.1				
5.2				

<sup>6</sup>日间护理敏感条件（Ambulatory Care Sensitive Conditions，ACSCs）是那些为被认为通过应用公共卫生干预和早期疾病管理可以避免的住院医疗服务，通常是动态地设置诸如初级保健里病人的转送服务。ACSCs（日间护理敏感条件）入院率高可提供间接证据说明病人享有的初级卫生保健不足，或医院专科医疗服务的技术和资源不足，或者专科服务和初级卫生保健服务缺乏互动联系。.



总的行动计划

(如有必要可另增加页)

一般活动:

有关特殊标准和指标的评价活动

对5项标准重要性排序

请根据下列5项标准的相对重要性程度，给他们按1、2、3、4、5排序。

最重要排1，次之排2，以此类推…… 到5。

管理政策	患者评估	患者信息和干预	促进健康的工作环境	持续性和合作性

## 补充的总评价

编号	标准	全部做到	做了大部分	做到一半	做了一点	一点没做	不知道
1	管理政策						
	总分:	9	9	9	9	9	9
2	患者评估						
	总分:	7	7	7	7	7	7
3	患者信息和干预						
	总分:	6	6	6	6	6	6
4	促进健康的工作环境						
	总分:	10	10	10	10	10	10
5	持续性和合作性						
	总分:	8	8	8	8	8	8
总分:		40	40	40	40	40	40

## 附表二

填表人姓名：            性 别     :    专业

职务：                从事医院管理时间：        年

联系方式：            常用email:        @

教育程度： 博士     硕士         本科

你认为这份量表容易填写吗？

非常容易    比较容易    比较难     很难

如果难，请说明原因： 看不懂

工作量大：

其他：

你会在工作中使用这份量表吗？ 会     不会

如果不会，请说明原因： 经费紧张    难以做到    没有价值

无行政命令    无资金支持

其 他：

你对所接受的调查满意吗？ 满意     比较满意     不满意

如果不满意，请说明原因：

你对此项调查的评议：

Appendix ii  
Invitation Letter  
调查邀请信

尊敬的医院领导及医院管理研究人员：

非常感谢您于百忙中抽出时间接受我们关于“世界卫生组织健康促进医院自评量表中文版（WHO Self-Assessment Tool for Health Promotion In Hospital）”的研究调查。

健康促进医院是21世纪医院服务质量管理发展的主要潮流和方向。为了发展适合中国医院使用并能参与国际医院医疗服务质量交流的健康促进医院自评量表，为中国医院走向国际舞台尽一份力。加拿大著名大学蒙特利尔大学医学院卫生管理系和国内著名大学复旦大学公共卫生学院联手开展了这项国际合作课题。经世界卫生组织国际健康促进医院网项目负责人、WHO 健康促进医院自评量表的原作者Oliver Groene教授的肯定和支持，本课题将在“世界卫生组织健康促进医院自评量表”国际版（英文版）的基础上，发展一套既符合WHO“健康促进医院(health promoting Hospital or health promotion in hospital)”的定义、原则和标准，又适合中国国情和文化背景，并能被中国各个地区、各级医院都接受和采用的健康促进医院自评量表。这项课题将完全遵循世界卫生组织规定的跨文化发展量表的翻译、测试、考核程序，研制世界卫生组织（WHO）健康促进医院（HPH）自评量表中文版。此量表是WHO为了推动健康促进医院的发展，在丹麦创建健康促进医院成功经验的基础上，基于健康促进医院的定义、原则和策略，由Oliver Groene 教授领导、经专家小组集体讨论经过欧洲8国家37家医院实践后发展起来的。于2006年修订，目前该自评量表除了英文版，已经翻译成法语、西班牙语、德语、意大利语、丹麦语、爱沙尼亚语、波兰语、俄罗斯语。

我们将在全国3个城市（上海、云南昆明、安徽合肥）不同等级的医院调查医院领导、及负责医疗业务的领导（每个点至少10名，其中至少5名负责医疗业务的院长或副院长，至少2名护理部主任，至少3名负责医院质量管理的领导，也可以是医院领导或科室主任，或1名医院管理研究人员或领导）。

此量表中文版已经在蒙特利尔市（Montréal，蒙城）通过一直从事医疗卫生工作的华人完成了信度的预调查。现阶段进行的是对量表信度和效度的正式调查、测试。我们需要您根据您所在医院的实际情况填写此份量表。除了定量的选择外，请您务必对您所选择的条目进行定性的说明。

为了帮助我们进一步提高该量表中文版的质量，请您标出任何您不理解的、或者您或您感觉词义含糊不清、用法不妥当的词、词组、或不通顺的句子。最好请您推荐您认为比较好的词或词组。

2. 量表填完后，请您不吝赐教，发表您对本次调查的宝贵意见和评论。

为了感谢您对我们研究课题的支持，所有参与我们调查的医院领导，我们在课题结束后会向您赠送一份发行版的WHO健康促进医院自评量表及其指导手册，会应您要求提供您所在医院的健康促进情况的分析报告及其发展建议，授权您在工作中使用该量表创建健康促进医院，并对您使用该量表过程中遇到的问题，提供一般技术咨询。

我们采集的数据资料仅作为研究改进量表，以及测试量表的信度和效度使用。采集的联系信息仅仅作为复核数据或向您发送分析报告使用。

附：

健康促进医院的发展的背景介绍

**(Introduction of developing the Health Promotion in Hospital):**

随着医学技术的发展以及疾病谱的改变，人们的健康观念随着社会的进步而发生了巨大变化，同时人口老化也使人们对卫生服务提出更多更高要求。医院作为卫生服务的重要提供机构，她的功能也已经今非昔比。现代医院已不单是收治患者的场所，更应该是维持、促进病人及其家属、医务人员和社区健康的重要功能单位。

自70年代末WHO重新定义健康（Health）是生理-心理-社会均处于良好状态后，医疗服务的发展也逐渐沿着这个标准不断完善着。1986年世界卫生组织通过《渥太华宪章》初次定义健康促进(Health Promotion, HP)的概念。HP是能够增强人们控制、提高自身健康的过程。健康促进医院就是把健康促进的原则、策略应用到医院的各项工作中。结合医院在保护健康中的特殊作用和地位，使医院发展成为一个既治疗疾病又保护、促进健康的工作场所和组织机构。任何人和组织都可以在不同程度上参与健康促进的活动，在健康促进活动中扮演不同的角色。或个体水平上的自我健康保护和促进，或在组织机构水平上建立促进健康的组织文化价值观、管理结构、工作流程及其生态环境，或在社区水平上促进公众的健康意识和自我健康管理水平。根据WHO定义的健康促进医院的概念，医院不仅要提供高质量、综合的医疗、护理服务，而且还要发展以促进健康为目标的法人单位、以促进健康为主导的医院文化和组织结构，主动、积极地和病人、全体医务人员及其社区共同分担保护、促进健康的使命，承担临床医疗服务的职责，发展促进健康的生态物理环境，使医院成为促进健康而不是威胁健康的重要功能单位。

HP包含了综合的健康资源、社会支持的和政治政策干预的过程<sup>7</sup>。健康促进的活动不仅在于通过健康教育活动提高和强化个人的健康保护能力和技巧，而且还通过采取行动影响、改变社会、环境、经济条件来改善和影响公众和个体的健康水平。1991年，世界卫生组织在布达佩斯宣言里明确了健康促进医院的概念、原则和发展策略。健康促进医院传递了一种崭新的医院服务的价值观念、原则和文化。她不仅仅涉及包括提供高质量综合的医疗、护理服务等常规标准，还包含发展以健康促进为目标的法人身份以及医院的组织结构和文化，其中包括主动积极地和病人及全体职工共同承担医疗服务和健康促进的作用，医院应自觉发展成为有利于促进健康的物理环境，并要积极地与社区开展合作<sup>8</sup>。

国际上用于医院医疗服务评价的权威量表很多，其中代表性的机构有：澳大利亚卫生保健标准委员会（ACHS），加拿大卫生服务认证委员会（CCHSA）；法国卫生高级管理处（HAS），英国卫生质量服务（HQS），美国卫生保健组织认证联合委员会（JCAHO），以及由国际标准组织的分支机构（JCAHO）、国际联合委员会（JCI）发展的国际医院医疗服务质量评估标准。卫生部曾于1989在全国范围内试行三级医院评审标准，目前又推出2008版医院医疗服务质量评审标准。

<sup>7</sup> Ottawa Charter for Health Promotion, 1986. [http://www.euro.who.int/AboutWHO/Policy/20010827\\_2](http://www.euro.who.int/AboutWHO/Policy/20010827_2)

<sup>8</sup> WHO Regional Office for Europe Health Promotion in Hospitals: Evidence and Quality Management, World Health Organization 2005



然而，无论是目前引进的国际权威量表JCI评审标准，还是卫生部目前推行的医院医疗服务质量评估标准，都侧重医院对病人的临床工作质量，都是把优秀的临床工作的标准、典型模式作为医院日常工作的标准。然而他们都是侧重对生理健康的促进，忽略了心理健康指标和社会支持，没有医院职工健康保护和健康促进方面的标准，没有医院环境健康促进方面的标准，也缺乏对评估对病人提供的信息方面的满意度情况，缺乏对病人护理过程中促进健康方面工作的评估标准，因此具有一定局限性。

世界卫生组织于1993成立了国际健康促进医院网，到2005年，已有36个国家的700所医院加入了世界卫生组织健康促进医院网。WHO健康促进医院自评量表可被当作是对目前各种国际权威质量评估标准外必不可少的标准。该量表分五个标准领域：管理政策、患者评估、患者信息和干预、促进健康的工作环境、持续性和合作。它不仅向医院提供了关于提高医疗服务质量必须遵守的原则、方法，为医院提供了策略上指导和评价，而且有助于医院从生理、心理、社会的综合方面全面把握医疗服务的内涵和外延，把促进健康的理念、价值观融入医院的日常工作。此外，WHO充分考虑到了目前医院所使用的各种医疗质量评估方法，倡导医院或国家的卫生管理机构将该量表纳入各自的卫生服务质量管理体系中，互为补充以更好地推动医疗服务质量的提高，改善医患关系，提高病人满意度，提高综合的医疗服务投入产出的长远效率。例如，医院可以卫生部颁发的医疗质量评估标准为具体操作指南，以WHO健康促进医院自评量表标准为发展方向，结合工作实际调整、改进医疗服务的管理流程、服务内容和质量，对照标准发现差距、不断改进。

这份量表没有标准上限，是开放性的自评工具和指导原则，她可以使您在制定医院管理的各项政策、进行各项决策时，为您提供一个价值判断标准。帮助您以科学、合理、高效的方式统筹、领导医院的各项工作，使您的医院在不知不觉中完全达到卫生部医院医疗服务质量管理要求，并且能和国际医院的服务标准要求接轨，成为一所健康促进医院，使您的医院建立起平等、互信、尊重的医患关系，最大程度地防止医患纠纷、利用医疗资源、减少不合理医疗花费。

## Appendix iii

## Compare the Back Translation with the Source Instrument of WHOSATHPH

- Comment people:
- Profession:
- Education:
- Contact information:
  
- Note: compare the two sentences and fill the **number into the small frame**.

1. completely the same thing
2. almost the same
3. Some
4. almost not
5. completely different

1

### Example:

Responsibilities and requirements for self-assessment

1. The responsibilities of self-assessment should be filed. 1
2. There should be one person (project manager) to take charge of the work. 4

1. Responsibilities for the self-assessment should be documented in this section.
2. One person has .....

1. completely the same thing
2. almost the same
3. Some
4. almost not
5. completely different

2

## WHO Self assessment tool for HPH

Responsibilities and requirements for self-assessment

- 1. The responsibilities of self-assessment should be filed.
- 2. There should be one person (project manager) to take charge of the work.
- 3. The self-assessment is based on the organizational structure and available personnel resources of the hospital. The self-assessment of each standard could be distributed to different departments. For example, the senior managers are responsible for the management policy, continuity and cooperation of the self-assessment; while the clinical staff are responsible for the other parts of the self-assessment.

- 1. Responsibilities for the self-assessment should be documented in this section.**
- 2. One person has to take the overall responsibility (project leader).**
- 3. Additional responsibilities may be distributed for the various standards, according to the hospital's structure and human resources available**

**Note:**

**HP =health promotion**

3

## WHO Self assessment tool for HPH

- 1. Each participant of the self-assessment should sign the agreement to confirm that they are willing to collect the data, or monitor the data collection.
- 2. The action plan of the health promotion in hospital should be discussed and tailored by the expert group.
- 3. The action plan should be approved by the project manager, who is in charge of the health promotion in hospital. The manager will foster the implementation of the plan positively.
- 4. The action plan should be introduced to the management.

- 1. Each member should sign an agreement to confirm that they will collect, or supervise the collection of data.**
- 2. The action plan should be discussed and planned by the whole steering group.**
- 3. The project leader approves the action plan and facilitates its implementation.**
- 4. The action plan needs to be presented to management.**

4

# WHO Self assessment tool for HPH

## Standard 1: Management Policy

<ul style="list-style-type: none"> <li><input type="checkbox"/> 1. The hospital has set up the policy for health promotion.</li> <li><input type="checkbox"/> 2. The policy is implemented as one part of the whole quality management system in hospital, whose aim is to improve the general level of healthcare in hospital.</li> <li><input type="checkbox"/> 3. The management policy for health promotion in hospital is for the patients, relatives, and medical workers.</li> </ul>	<ul style="list-style-type: none"> <li>1. <b>The organization has a written policy for health Promotion</b></li> <li>2. <b>The policy is implemented as part of the overall organization quality improvement system, aiming at improving health outcomes.</b></li> <li>3. <b>This policy is aimed at patients, relatives and staff.</b></li> </ul>
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5

# WHO Self assessment tool for HPH

<p>Objective:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> 1. to describe the framework of health promotion, to integrate health promotion as a part into the quality management system in hospital.</li> </ul>	<p>Objective</p> <ul style="list-style-type: none"> <li>• To describe the framework for the organization's activities concerning health promotion as an integral part of the organization's quality management system.</li> </ul> <div style="border: 1px solid red; padding: 5px; margin-top: 10px;"> <ul style="list-style-type: none"> <li>1. completely the same thing</li> <li>2. almost the same</li> <li>3. Some</li> <li>4. almost not</li> <li>5. completely different</li> </ul> </div>
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6

# WHO Self assessment tool for HPH

## 1.1 The organization identifies responsibilities for health promotion.

1.1.1. The hospital's stated aims and mission include health promotion [Evidence: e.g. time- table for the action].

Comments

Yes	Partly	No
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

1.1.2. Minutes of the governing body reaffirm agreement within the past year to participate in the WHO HPH project [Evidence: e.g. date for the decision or for payment of the annual fee].

Comments

Yes	Partly	No
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

1.1 The hospital has set up the explicit aim and responsibility for health promotion hospital.

- 1.1.1
- The hospital has proposed the aim and mission of health promotion. (evidence: time-table for the activities of health promotion)
- 1.1.2
- In the past year, the hospital restated the participation of WHO project of health promotion and signed the agreement. It has been recorded at the hospital management meetings. (evidence: date and annual fees to participate the WHO project of health promotion)
- 

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# WHO Self assessment tool for HPH

1.1.3. The hospital's current quality and business plans include health promotion (HP) for patients, staff and the community [Evidence: e.g. health promotion is explicit in the plan of action].

Comments

Yes	Partly	No
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

1.1.4. The hospital identifies personnel and functions for the coordination of HP [Evidence: e.g. staff member nominated for the coordination of HP].

Comments

Yes	Partly	No
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- 1.1.3
- The current quality and management plan of the hospital include the contents of health promotion (to patients, employees, and community services). (Evidence: there are explicit contents of health promotion in the hospital's action plan.)
- 1.1.4
- The hospital assigns somebody in charge of the coordination of health promotion. (evidence: the hospital appoints employee to be responsible for the coordination of health promotion)

8

## WHO Self assessment tool for HPH

1.2

The hospital arranges the resources for the implementation of health promotion

- 1.2.1
- The hospital makes a special budget and materials to ensure the implementation of health promotion services.(evidence: check the budget and personnel resources)
- 1.2.2
- All clinical departments can provide the operational guidelines or pathways with regard to health promotion.(evidence: check guidelines)
- 1.2.3
- The easy recognized structures and facilities (including resources, spaces, equipments) for health promotion have been built up by the hospital.
- (evidence: special elevator for patients.)

**1.2.** The organization allocates resources for the implementation of health promotion.

1.2.1. There is an identifiable budget for HP services and materials [Evidence: e.g. budget or staff resources].

Yes  Partly  No

Comments

1.2.2. Operational procedures such as clinical practice guidelines or pathways incorporating HP actions are available in clinical departments [Evidence: e.g. check guidelines].

Yes  Partly  No

Comments

1.2.3. Specific structures and facilities required for health promotion (including resources, space, equipment) can be identified [Evidence: e.g. facilities to lift patients available].

Yes  Partly  No

Comments

9

## WHO Self assessment tool for HPH

- **1.3**
- For monitoring the quality of health promotion activities, the hospital ensures the smooth procedures of data collection and evaluation
- 1.3.1
- The hospital collects the data during the intervention period of health promotion, and employees can use the data to evaluate the quality of health promotion. (evidence: the data access to the employees during the survey)
- 1.3.2
- The hospital has set up the quality assessment procedure of health promotion activities. (evidence: available time-table for survey)

**1.3.** The organization ensures the availability of procedures for collection and evaluation of data in order to monitor the quality of health promotion activities.

1.3.1. Data are routinely captured on HP interventions and available to staff for evaluation [Evidence: e.g. availability assessed in staff survey].

Yes  Partly  No

Comments

1.3.2. A programme for quality assessment of the health promoting activities is established [Evidence: e.g. time schedule for surveys is available].

Yes  Partly  No

Comments

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# WHO Self assessment tool for HPH

*Complementary indicators*

1. \_\_\_\_\_ % of staff aware of health promotion policy
2. \_\_\_\_\_ % of patients (and relatives) aware of standards for health Promotion
3. \_\_\_\_\_ % budget dedicated to staff HP activities

Complementary indicators

1. The percentage of employees who know the policy of health promotion %
2. The percentage of patients (and relatives) who know the standards of health promotion\_\_\_\_%
3. The percentage of budgets that goes to employees' participation of health promotion\_\_\_\_%

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## WHO Self assessment tool for HPH Standard 2: Patient Assessment

standard

The hospital ensures that medical workers do the patients' need assessment of health promotion activities systematically, during the cooperation with patients

**Objective**

To support the clinical treatment for patients, and improve the prognosis, health, and well-being of patients

**Standard**

**The organization ensures that health professionals, in partnership with patients, systematically assess needs for health promotion activities.**

**Objective**

To support patient treatment, improve prognosis and to promote the health and well-being of patients.

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## WHO Self assessment tool for HPH Standard 2: Patient Assessment

- 2. 1
- The hospital take actions to make all patients satisfied with the needs of health promotion
- 
- 2.1.1
- The hospital provides the patients with the following guideline: health education on smoking, alcohol drinking, nutrition, and psycho-social-economic status. (evidence: the availability of materials)
- 2.1.2
- The guidelines / measures have been revised in the past year by the hospital. (evidence: the revising date, the reviser)
- 2.1.3
- The hospital provides some specific group of patients (for example, asthma, diabetes, COPD, surgery, rehabilitation) with guidelines how to identify the needs of health promotion. (evidence: check the patients who take specific treatment in the clinical departments)

**2.1.** The organization ensures the availability of procedures for all patients to assess their need for health promotion.

2.1.1. Guidelines on how to identify smoking status, alcohol consumption, nutritional status, psycho-social-economic status are present [Evidence: e.g. check availability].

	Yes	Partly	No
Comments	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

2.1.2. Guidelines/procedures have been revised within the last year [Evidence: e.g. check date, person responsible for revising guidelines].

	Yes	Partly	No
Comments	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

2.1.3. Guidelines are present on how to identify needs for HP for groups of patients (e.g. asthma patients, diabetes patients, chronic obstructive pulmonary disease, surgery, rehabilitation) [Evidence: e.g. for groups of patients specifically treated in the clinical department].

	Yes	Partly	No
Comments	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## WHO Self assessment tool for HPH

**2.2.** The assessment of a patient's need for health promotion is done at first contact with the hospital. This is kept under review and adjusted as necessary according to changes in the patient's clinical condition or on request.

2.2.1. The assessment is documented in the patient's record at admission [Evidence: e.g. identified by patient records audit].

	Yes	Partly	No
Comments	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

2.2.2. There are guidelines / procedures for reassessing needs at discharge or end of a given intervention [Evidence: e.g. guidelines present].

	Yes	Partly	No
Comments	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- 2.2
- The patients' need is assessed by medical staff at the first visit, and the assessment is kept adjusting and improving according to the changes of the patients' clinical conditions.
- 2.2.1
- The assessment of health promotion is placed in the patients' medical record when hospitalization. (evidence: check the medical record)
- 2.2.2
- When the patients leave the hospital or the intervention is over, the hospital provides the patients with operational guideline or procedures of re-assessing the need of health promotion.(evidence: check the available operational guideline)



## WHO Self assessment tool for HPH

### 2.3. The patient's needs-assessment reflects information provided by others and ensures sensitivity to social and cultural background.

2.3.1. Information from referring physician or other relevant sources is available in the patient's record [Evidence: for all patients referred from physician].

Comments

Yes Partly No

2.3.2. The patient's record documents social and cultural background as appropriate [Evidence: religion that requires special diet or other specific attention. Social conditions indicating that the patient is at risk].

Comments

Yes Partly No

- 2.3
- The patients' need assessment of health promotion can be consistent to information provided by others, and it can reflect sensitively the social and cultural backgrounds of the patients.
- 2.3.1
- There are assessment comments or other relevant information sources from the referring physicians in the patients' medical record. (evidence: check all referred records from physicians)
- 2.3.2
- The patients' social and cultural background regarded as appropriate medical documents. (evidence: special food and attention by religion, social conditions indicating the health risk of the patients)

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## WHO Self assessment tool for HPH

### Complementary indicators

1. \_\_\_\_\_ % of patients assessed for generic risk factors
2. \_\_\_\_\_ % of patients assessed for disease specific risk factors according to guidelines.
3. \_\_\_\_\_ score on survey of patients' satisfaction with assessment procedure

### Complementary indicators

1. The percentage of patients who take assessment of general disease risk factors %
2. The percentage of patients who take assessment of specific disease risk factors, according to the guideline %
3. The score of patients' satisfaction with the process of assessment.

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# WHO Self assessment tool for HPH

## Standard3 Patient Information & Intervention

- **standard**

The hospital provides the patients with important information related to their diseases and health, and interventions of health promotion are built up for all patient pathways.

Objective

- The hospital ensures the patients know the planned activities, they will have the positive partnership during the planned activities. The hospital foster the combination between the incorporated health promotion activities and all patient pathways.

The organization provides patients with information on significant factors concerning their disease or health condition.

Health promotion interventions are established in all patient pathways.

- **Objective**

To ensure that the patient is informed about planned activities, to empower the patient in an active partnership in planned activities and to facilitate integration of health promotion activities in all patient pathways.

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# WHO Self assessment tool for HPH

**3.1.** Based on the health promotion needs assessment, the patient is informed of factors impacting on their health and, in partnership with the patient, a plan for relevant activities for health promotion is agreed.

3.1.1. Information given to the patient is recorded in the patient's record [Evidence: e.g. random review of patient records for all patients].

Comments

3.1.2. Health promotion activities and expected results are documented and evaluated in the records [Evidence: e.g. patient records' audit]

Comments

	Yes	Partly	No
3.1.1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.1.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- 3.1
- Based on the patients' need assessment of health promotion, the patients are informed of the health risk factors, and the partnership is built up, the patients agree to participate the health promotion activities.
- 3.1.1
- The information to the patients is recorded in the medical record (evidence: the review some medical records chosen randomly from all)
- 3.1.2
- Health promotion activities and expected results are recorded in the patients' medical record. (evidence: check the medical record)

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## WHO Self assessment tool for HPH

- 3.1.3
- The patients' satisfaction assessment is measured by the hospital, and results are integrated to the quality management system.  
(evidence: check all kinds of assessment methods in the hospital: survey, focus group interview, questionnaire survey, time-tables)

3.1.3. Patient satisfaction assessment of the information given is performed and the results are integrated into the quality management system  
[Evidence: e.g. various assessment methods: survey, focused group interview, questionnaire. Time schedule].

	Yes	Partly	No
Comments	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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## WHO Self assessment tool for HPH

### 3.2. The organization ensures that all patients, staff and visitors have access to general information on factors influencing health.

3.2.1. General health information is available  
[Evidence: e.g. availability of printed or online information, or special information desk].

Comments

- 3.2
- The hospital ensures all patients, employees, and visitors can access easily general scientific knowledge on health risk factors
- 3.2.1
- The hospital provides the general scientific knowledge on health (evidence: check the presswork, or online information, or special information window provided by the hospital)

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## WHO Self assessment tool for HPH

3.2.2. Detailed information about high/risk diseases is available [Evidence: e.g. availability of printed or online information, or special information desk].

Comments

3.2.3. Information is available on patient organizations [Evidence: e.g. contact-address is provided].

Comments

- 3.2.2
- The hospital provides the detailed information on high incidence / high risk diseases (evidence: presswork, or online information, or special information window are provided)
- 3.2.3
- The hospital provides the patients association or similar organizations with service information. (evidence: the contact information, address)

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## WHO Self assessment tool for HPH

### Complementary indicators

1. The percentage of patients who accept special behavioral training of self-management (based on own conditions)\_\_\_%
2. The percentage of patients who accept self-management training (including how to change the disease risk factors, how to select the therapy, etc) based on own conditions\_\_\_%
3. Score (survey of the patients' experience of information accessing and intervention accepting)

- \_\_\_\_\_% of patients educated about specific actions in self-management of their condition
- \_\_\_\_\_% of patients educated about risk factor modification and disease treatment options in the management of their condition.
- \_\_\_\_\_ Score on survey of patients' experience with information and intervention procedures

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## WHO Self assessment tool for HPH

### Standard 4: Promoting a Healthy Workplace

<ul style="list-style-type: none"> <li>• standard <input type="checkbox"/></li> <li>• The hospital management establishes the various positive conditions to develop the safe and healthy workplace.</li> <li>• <b>Objective</b> <input type="checkbox"/></li> <li>• The hospital develop the safe and healthy workplace.</li> <li>• to support the health promotion activities of the employees.</li> </ul>	<p><b>The management establishes conditions for the development of the hospital as a healthy workplace.</b></p> <ul style="list-style-type: none"> <li>• <b>Objective</b> <ul style="list-style-type: none"> <li>➤ To support the development of a healthy and safe workplace.</li> <li>➤ To support health promotion activities of staff.</li> </ul> </li> </ul>
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## WHO Self assessment tool for HPH

<ul style="list-style-type: none"> <li>• 4.1 <input type="checkbox"/></li> <li>• The hospital ensures the developments and implementation of healthy and safe workplace</li> <li>• 4.1.1 <input type="checkbox"/></li> <li>• The working environment accords with the national and regional standards and regulations (evidence: the recognized national or international (European) standards)</li> <li>• 4.1.2 <input type="checkbox"/></li> <li>• The employees obey the operational standards and requirements of safety and health. All risk factors in the workplace are clearly indentified.(evidence: check the data of occupational injuries)</li> </ul>	<div style="background-color: #FFD700; padding: 5px; margin-bottom: 10px;"> <p><b>4.1.</b> The organization ensures the development and implementation of a healthy and safe workplace.</p> </div> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 65%; padding: 5px;"> <p>4.1.1. Working conditions comply with national/regional directives and indicators [Evidence: e.g. national and international (EU) regulations are recognized].</p> </td> <td style="width: 5%;"></td> <td style="width: 15%; text-align: center; font-size: 8px;">Yes</td> <td style="width: 15%; text-align: center; font-size: 8px;">Partly</td> <td style="width: 10%; text-align: center; font-size: 8px;">No</td> </tr> <tr> <td style="background-color: #D3D3D3; padding: 5px;"> <p>Comments</p> </td> <td style="border: 1px solid #ccc; text-align: center; width: 5%;"></td> <td style="border: 1px solid #ccc; text-align: center; width: 15%;"></td> <td style="border: 1px solid #ccc; text-align: center; width: 15%;"></td> <td style="border: 1px solid #ccc; text-align: center; width: 10%;"></td> </tr> </table> <table style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <tr> <td style="width: 65%; padding: 5px;"> <p>4.1.2. Staff comply with health and safety requirements and all workplace risks are identified [Evidence: e.g. check data on occupational injuries].</p> </td> <td style="width: 5%;"></td> <td style="width: 15%; text-align: center; font-size: 8px;">Yes</td> <td style="width: 15%; text-align: center; font-size: 8px;">Partly</td> <td style="width: 10%; text-align: center; font-size: 8px;">No</td> </tr> <tr> <td style="background-color: #D3D3D3; padding: 5px;"> <p>Comments</p> </td> <td style="border: 1px solid #ccc; text-align: center; width: 5%;"></td> <td style="border: 1px solid #ccc; text-align: center; width: 15%;"></td> <td style="border: 1px solid #ccc; text-align: center; width: 15%;"></td> <td style="border: 1px solid #ccc; text-align: center; width: 10%;"></td> </tr> </table>	<p>4.1.1. Working conditions comply with national/regional directives and indicators [Evidence: e.g. national and international (EU) regulations are recognized].</p>		Yes	Partly	No	<p>Comments</p>					<p>4.1.2. Staff comply with health and safety requirements and all workplace risks are identified [Evidence: e.g. check data on occupational injuries].</p>		Yes	Partly	No	<p>Comments</p>				
<p>4.1.1. Working conditions comply with national/regional directives and indicators [Evidence: e.g. national and international (EU) regulations are recognized].</p>		Yes	Partly	No																	
<p>Comments</p>																					
<p>4.1.2. Staff comply with health and safety requirements and all workplace risks are identified [Evidence: e.g. check data on occupational injuries].</p>		Yes	Partly	No																	
<p>Comments</p>																					

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## WHO Self assessment tool for HPH

- 4.2
- The hospital sets up and implements the comprehensive development strategy of personnel resources, including training and development of employees' skills on health promotion
- 4.2.1
- The training to the new employee, including the introduction of health promotion policy in the hospital  
(evidence: interview the new employee)
- 4.2.2
- All new employees know the health promotion policy in the hospital  
(evidence: the annual performance assessment or employees' participation of the health promotion project)

**4.2.** The organization ensures the development and implementation of a comprehensive Human Resources Strategy that includes training and development of health promotion skills of staff.

4.2.1. New staff receive an induction training that addresses the hospital's health promotion policy [Evidence: e.g. interviews with new staff].

Comments

Yes	Partly	No
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4.2.2. Staff in all departments are aware of the content of the organization's health promotion policy [Evidence: e.g. annual performance evaluation or staff participation in the HP programme].

Comments

Yes	Partly	No
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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## WHO Self assessment tool for HPH

- 4.2.3
- The hospital has the performance evaluation system and career continuous education system with regard to health promotion (evidence: review the employees' files, or interview employees)
- 4.2.4
- The multi-disciplinary group develops the practical guidelines and operational procedures of clinical work (evidence: check the operational procedures and employees)

4.2.3. A performance appraisal system and continuing professional development including health promotion exists [Evidence: e.g. documented by review of staff files or interview].

Comments

Yes	Partly	No
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4.2.4. Working practices (procedures and guidelines) are developed by multidisciplinary teams [Evidence: e.g. check procedures, check with staff].

Comments

Yes	Partly	No
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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## WHO Self assessment tool for HPH

- 4.2.5
- The employees take part in the hospital decision-making, audit, and reviewing evaluation (evidence: check the records of working groups, for the information on participation of employee representatives)

- **4.2.5.**
- **Staff are involved in hospital policy-making, audit and review [Evidence: check with staff; check minutes of working groups for participation of staff representatives].**

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### 4.3. The organization ensures availability of procedures to develop and maintain staff awareness on health issues.

4.3.1. Policies for awareness on health issues are available for staff [Evidence: e.g. check for policies on smoking, alcohol, substance misuse and physical activity].

Comments

- 4.3
- to develop the health awareness of employees
- 4.3.1
- The hospital builds relevant policies to encourage the employees to know health conceptions (evidence: check the relevant policies on smoking, alcohol drinking, substance misuse, and physical activity)

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4.3.2. Smoking cessation programmes are offered [e.g. Evidence on availability of programmes].

Comments

4.3.3. Annual staff surveys are carried out including an assessment of individual behaviour, knowledge on supportive services/policies, and use of supportive seminars [Evidence: check questionnaire used for and results of staff survey].

Comments

- 4.3.2
- Offering smoking cessation program(evidence: available activities and projects)
- 4.3.3
- Annual employee survey, for assessment of personal behavior, knowledge of supportive services and policies, information exchange in seminars on health promotion (evidence: check the annual employee questionnaire and results)

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## WHO Self assessment tool for HPH

### Standard 4: Promoting a Healthy Workplace

#### Complementary indicators

1. \_\_\_\_\_ % of staff smoking
2. \_\_\_\_\_ Smoking cessation
3. \_\_\_\_\_ Score of survey of staff experience with working conditions
4. \_\_\_\_\_ % of short-term absence
5. \_\_\_\_\_ % of work-related injuries
6. \_\_\_\_\_ Score on burnout scale

1. The percentage of employees who smoke\_\_\_\_ %
2. The percentage of employees who quit smoking
3. The score of employees' erception on working environment
4. The percentage of employees who have short-spell absence\_\_\_\_%
5. The percentage of employees who suffer from work injuries
6. Employees' score of burnout scale

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## WHO Self assessment tool for HPH

### Standard5 Continuity and Cooperation

The organization has a planned approach to collaboration with other health service providers and other institutions and sectors on an ongoing basis.

• **Objective**

To ensure collaboration with relevant providers and to initiate partnerships to optimize the integration of health promotion activities in patient pathways.

- Standard 5
- The hospital cooperates with other health services organizations and agencies designedly and continuously.

**Objective**

- The hospital ensures to start up the cooperation with relevant health services organizations for optimizing the integrative health promotion activities into the patient pathways.

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## WHO Self assessment tool for HPH

**5.1.** The organization ensures that health promotion services are coherent with current provisions and regional health policy plans.

5.1.1. The management board is taking into account the regional health policy plan [Evidence: e.g. regulations and provisions identified and commented in minutes of the meeting of management board].

Comments

5.1.2. The management board can provide a list of health and social care providers working in partnership with the hospital [Evidence: e.g. check update of list].

Comments

	Yes	Partly	No
5.1.1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.1.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- 5.1
- The hospital ensures the health promotion services accord with the current health resources supply and regional health policies and plans.
- 5.1.1
- The hospital management considers the regional health policies and plans. (evidence: the regulations and resources supply discussions are recorded in the hospital management meetings)
- 5.1.2
- The hospital management can provide the list of the hospital's partners, health and social welfare organizations (evidence: check the update of the list)

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## WHO Self assessment tool for HPH

5.1.3. The intra- and intersectoral collaboration with others is based on execution of the regional health policy plan [Evidence: e.g. check congruency].

Comments

Yes	Partly	No
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

5.1.4. There is a written plan for collaboration with partners to improve the patients' continuity of care [Evidence: e.g. criteria for admittance, plan for discharge].

Comments

Yes	Partly	No
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- 5.1.3
- (the cooperation among departments within hospitals, and cooperation between hospital and other organizations) is based on the implementation of the regional health plans. (evidence: check the consistency between hospital work and regional health plans)
- 5.1.4
- The hospital draws the written cooperative plan with the partners together to improve the continuity of nursing (evidence: check the standards of hospitalization, and plan of leaving hospital)

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## WHO Self assessment tool for HPH

5.2.3. The receiving organization is given in timely manner a written summary of the patient's condition and health needs, and interventions provided by the referring organization [Evidence: e.g. availability of copy].

Comments

Yes	Partly	No
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

5.2.4. If appropriate, a plan for rehabilitation describing the role of the organization and the cooperating partners is documented in the patient's record [Evidence: e.g. review of records].

Comments

Yes	Partly	No
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- 5.2.3
- The referring hospital gives the written summary to the receiving hospital in time, the summary includes the patient's conditions, health needs, interventions (evidence: the photocopy of the summary)
- 5.2.4
- If proper, the rehabilitation plan should be recorded in the patients' medical record, addressing the role of the hospital and the partners. (evidence: review the medical record)

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## WHO Self assessment tool for HPH

### 5.2. The organization ensures the availability and implementation of health promotion activities and procedures during out-patient visits and after patient discharge.

5.2.1. Patients (and their families as appropriate) are given understandable follow-up instructions at out-patient consultation, referral or discharge [Evidence: e.g. patients' evaluation assessed in patient surveys].

Comments

Yes Partly No

5.2.2. There is an agreed upon procedure for information exchange practices between organizations for all relevant patient information [Evidence: e.g. check availability of procedure].

Comments

Yes Partly No

- 5.2
- The hospital ensures the availability of implementation of health promotion activities, let the patients participate the activities during the clinic visits or after leaving the hospital.
- 5.2.1
- The patients (and relatives, if applicable) can get the understandable sequent guidelines during the clinic consultation, referring, or leaving hospital (evidence: evaluation of patients' satisfaction)
- 5.2.2
- There is a concerted procedure between hospitals, about information exchange regarding the patients (evidence: check the existing procedure)

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## WHO Self assessment tool for HPH

### • Complementary indicators

1.  The percentage of sending the summary of leaving hospital. The summary should be sent to the patient, the referral clinic within 2 weeks, or given it to the patient when leaving hospital. \_\_\_\_\_ %
2.  The rate of re-hospitalization of patients with ambulatory care sensitive conditions within 5 days \_\_\_\_\_ %
3.  The score from the patients who prepare for leaving hospital.

1. \_\_\_\_\_ % of discharge summaries sent to GP or referral clinic within two weeks or handed to patient on discharge
2. \_\_\_\_\_ Readmission rate for ambulatory care sensitive conditions within 5 days
3. \_\_\_\_\_ Score on patient discharge preparation survey

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# WHO Self assessment tool for HPH

## Overall

1. Overall action plan (to add  another page(s) if needed)
2. General action
3. Assessment action related  to specific standards and indicators

1. Overall action plan (*add more pages for full report if necessary*)
2. General actions
3. Actions related to the assessment of specific standards and indicators

Appendix iv  
 Result data  
 General Statistic Description for Items

	N	Mean	Std. Deviation	Medi an	Mo de	Minim um	Maxim um	Percentiles		
								25%	50%	75%
Standard s.1.1.1	40	3.50	1.21	4	4	1	5	2.00	4.00	5.00
Standard s.1.1.2	40	.98	1.54	0	0	0	5	.00	.00	1.00
Standard s.1.1.3	40	3.93	1.05	4	4	2	5	3.75	4.00	5.00
Standard s.1.1.4	40	3.86	1.59	4.5	5	1	5	3.00	4.50	5.00
Standard s.1.2.1	40	3.55	1.43	4	5	0	5	3.00	4.00	5.00
Standard s.1.2.2	40	3.60	1.13	4	4	0	5	3.00	4.00	4.00
Standard s.1.2.3	40	3.86	1.09	4	4	2	5	3.00	4.00	5.00
Standard s.1.3.1	40	2.62	1.45	2.5	2	0	5	2.00	2.50	4.00
Standard s.1.3.2	40	2.55	1.78	2.5	1	0	5	1.00	2.50	4.00
Standard s.2.1.1	40	4.12	.83	4	4	2	5	4.00	4.00	5.00
Standard s.2.1.2	40	3.24	1.32	4	4	0	5	2.00	4.00	4.00
Standard s.2.1.3	40	3.90	.88	4	4	2	5	3.75	4.00	4.25
Standard s.2.2.1	40	2.76	1.65	3	2	0	5	2.00	3.00	4.50
Standard s.2.2.2	40	2.88	1.69	3	5	0	5	2.00	3.00	4.50
Standard s.2.3.1	40	3.71	1.69	4	5	0	5	3.00	4.00	5.00
Standard s.2.3.2	40	3.27	1.57	4	4	0	5	2.00	4.00	5.00

Standard s.3.1.1	40	3.93	1.40	4	5	0	5	3.00	4.00	5.00
Standard s.3.1.2	40	3.17	1.45	3	2	0	5	2.00	3.00	4.00
Standard s.3.1.3	40	3.73	1.43	4	5	0	5	2.50	4.00	5.00
Standard s.3.2.1	40	4.39	.86	5	5	2	5	4.00	5.00	5.00
Standard s.3.2.2	40	3.83	1.14	4	4	0	5	3.00	4.00	5.00
Standard s.3.2.3	40	2.29	2.00	2	0	0	5	.00	2.00	4.50
Standard s.4.1.1	40	4.34	1.13	5	5	0	5	4.00	5.00	5.00
Standard s.4.1.2	40	4.39	.89	5	5	0	5	4.00	5.00	5.00
Standard s.4.2.1	40	3.63	1.50	4	5	0	5	2.00	4.00	5.00
Standard s.4.2.2	40	2.76	1.59	3	2	0	5	1.50	3.00	4.00
Standard s.4.2.3	40	3.34	1.65	4	5	0	5	2.00	4.00	5.00
Standard s.4.2.4	40	3.37	1.48	4	4	0	5	2.00	4.00	4.50
Standard s.4.2.5	40	4.10	1.09	4	5	1	5	4.00	4.00	5.00
Standard s.4.3.1	40	3.95	.97	4	4	2	5	3.50	4.00	5.00
Standard s.4.3.2	40	3.56	1.55	4	5	0	5	2.00	4.00	5.00
Standard s.4.3.3	40	2.27	1.64	2	2	0	5	1.00	2.00	4.00
Standard s.5.1.1	40	3.61	1.61	4	5	0	5	3.00	4.00	5.00
Standard s.5.1.2	40	3.71	1.68	4	5	0	5	3.00	4.00	5.00
Standard s.5.1.3	40	3.95	1.36	4	5	0	5	3.50	4.00	5.00
Standard s.5.1.4	40	3.24	1.77	4	5	0	5	2.00	4.00	5.00

Standard s.5.2.1	40	4.02	1.04	4	4	0	5	4.00	4.00	5.00
Standard s.5.2.2	40	2.90	1.62	3	4	0	5	2.00	3.00	4.00
Standard s.5.2.3	40	4.39	.95	5	5	2	5	4.00	5.00	5.00
Standard s.5.2.4	40	3.12	1.55	3	5	0	5	2.00	3.00	4.50

R-table 15 Inter-items Correlation Matrix  
Part1 Standard 1 Manage Policy

Inter-Item Correlation Matrix										
Item	Standards.1.1	Standards.1.2	Standards.1.3	Standards.1.4	Standards.1.2.1	Standards.1.2.2	Standards.1.2.3	Standards.1.3.1	Standards.1.3.2	Standards.2.1.1
	.1	1.2	3	4	1	2	3	1	2	
Standards.1.1	1.00									
Standards.1.2	0.08	1.00								
Standards.1.3	0.53	-0.03	1.00							
Standards.1.4	0.40	0.13	0.35	1.00						
Standards.1.2.1	0.21	0.09	0.43	0.55	1.00					
Standards.1.2.2	0.43	0.06	0.18	0.17	0.17	1.00				
Standards.1.2.3	0.35	0.23	0.40	0.38	0.28	0.35	1.00			
Standards.1.3.1	0.54	0.19	0.29	0.36	0.25	0.19	0.26	1.00		
Standards.1.3.2	0.54	0.37	0.17	0.44	0.19	0.18	0.28	0.81	1.00	
Standards.2.1.1	0.48	0.03	0.53	0.35	0.33	0.40	0.45	0.28	0.22	1.00
Standards.2.1.2	0.40	-0.03	0.27	0.07	0.13	0.26	0.19	0.39	0.34	0.28
Standards.2.1.3	0.49	-0.07	0.39	0.11	0.18	0.45	0.37	0.28	0.24	0.34
Standards.2.1.4	0.27	0.27	0.30	0.36	0.32	0.02	0.06	0.45	0.36	0.22

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2.1									
Standards.2.	0.31	0.15	0.28	0.11	0.32	0.18	0.22	0.40	0.31
2.2									
Standards.2.	0.34	0.12	0.25	-0.10	-0.01	0.17	0.18	0.38	0.26
3.1									
Standards.2.	0.40	0.22	0.31	0.20	0.19	0.30	0.17	0.50	0.45
3.2									
Standards.3.	0.45	0.21	0.34	0.23	0.19	0.17	0.22	0.40	0.38
1.1									
Standards.3.	0.37	0.29	0.39	0.19	0.29	0.09	0.22	0.32	0.35
1.2									
Standards.3.	0.32	0.09	0.30	0.25	0.01	0.24	0.18	0.35	0.34
1.3									
Standards.3.	0.40	0.12	0.40	0.63	0.21	0.22	0.35	0.22	0.36
2.1									
Standards.3.	0.57	-0.17	0.43	0.34	0.18	0.45	0.08	0.32	0.26
2.2									
Standards.3.	0.56	0.16	0.32	0.29	0.16	0.56	0.12	0.44	0.40
2.3									
Standards.4.	-0.27	-0.13	-0.23	-0.13	-0.16	-0.10	-0.32	-0.36	-0.30
1.1									
Standards.4.	-0.13	-0.20	0.04	0.05	0.05	0.11	-0.04	-0.23	-0.20
1.2									
Standards.4.	0.25	0.26	0.23	0.19	0.09	0.23	0.30	0.09	0.35
2.1									
Standards.4.	0.57	0.33	0.30	0.38	0.22	0.29	0.36	0.46	0.69
2.2									
Standards.4.	0.36	0.12	0.21	0.53	0.31	0.17	0.01	0.27	0.47
2.3									
Standards.4.	0.44	-0.07	0.19	0.21	0.09	0.46	0.17	0.44	0.36
2.4									
Standards.4.	0.40	0.12	0.32	0.46	0.19	0.50	0.24	0.34	0.44
2.5									
Standards.4.	0.57	0.23	0.36	0.40	0.14	0.48	0.34	0.32	0.39
3.1									
Standards.4.	0.40	0.16	0.28	0.44	0.37	0.36	0.05	0.26	0.31
3.2									
Standards.4.	0.55	0.21	0.28	0.36	0.33	0.19	0.13	0.63	0.67
3.3									
Standards.5.	0.43	-0.16	0.39	0.26	0.22	0.29	0.18	0.53	0.44



1.1									
Standards.5.1.2	0.34	0.06	0.15	0.13	-0.09	0.16	0.16	0.50	0.45
Standards.5.1.3	0.46	-0.17	0.08	0.15	-0.01	0.36	-0.05	0.43	0.30
Standards.5.1.4	0.36	-0.11	0.05	-0.05	-0.17	0.04	-0.15	0.29	0.22
Standards.5.2.1	0.07	-0.17	-0.07	-0.12	-0.08	0.22	-0.04	0.01	0.01
Standards.5.2.2	0.32	0.34	-0.11	0.14	-0.07	0.25	0.13	0.40	0.47
Standards.5.2.3	0.01	0.00	0.29	0.16	0.10	0.13	0.22	0.04	-0.01
Standards.5.2.4	0.26	0.15	0.21	-0.15	-0.10	0.34	-0.02	0.11	0.13

## Part 2 Standard 2 Patient Assessment

R-table 15 Inter-items Correlation Matrix

Item	Standards.2.1.1	Standard s.2.1.2	Standard s.2.1.3	Standard s.2.2.1	Standard s.2.2.2	Standar ds.2.3.1	Standar ds.2.3.2
Standards.2.1.1	1.00						
Standards.2.1.2	0.47	1.00					
Standards.2.1.3	0.58	0.31	1.00				
Standards.2.2.1	0.31	0.17	-0.02	1.00			
Standards.2.2.2	0.34	0.15	0.26	0.78	1.00		
Standards.2.3.1	0.20	0.14	0.28	0.53	0.68	1.00	
Standards.2.3.2	0.45	0.14	0.36	0.56	0.57	0.65	1.00
Standards.3.1.1	0.56	0.18	0.25	0.71	0.73	0.70	0.65
Standards.3.1.2	0.45	0.25	0.29	0.71	0.74	0.62	0.53
Standards.3.1.3	0.63	0.29	0.27	0.37	0.32	0.17	0.40

1.3							
Standards.3. 2.1	0.45	0.12	0.28	0.23	0.10	0.11	0.38
Standards.3. 2.2	0.49	0.31	0.35	0.35	0.27	0.32	0.53
Standards.3. 2.3	0.36	0.31	0.45	0.40	0.39	0.48	0.60
Standards.4. 1.1	-0.12	-0.08	-0.04	-0.17	-0.23	-0.18	-0.10
Standards.4. 1.2	0.03	-0.20	0.11	-0.10	0.00	-0.04	0.10
Standards.4. 2.1	0.47	0.46	0.25	0.19	0.11	0.20	0.43
Standards.4. 2.2	0.32	0.07	0.40	0.31	0.36	0.37	0.49
Standards.4. 2.3	0.33	0.37	0.19	0.28	0.07	-0.01	0.21
Standards.4. 2.4	0.53	0.35	0.43	0.30	0.31	0.17	0.53
Standards.4. 2.5	0.56	0.40	0.14	0.37	0.20	0.22	0.39
Standards.4. 3.1	0.65	0.34	0.37	0.35	0.32	0.22	0.60
Standards.4. 3.2	0.46	0.17	0.08	0.51	0.40	0.15	0.27
Standards.4. 3.3	0.34	0.27	0.28	0.51	0.43	0.33	0.59
Standards.5. 1.1	0.22	0.33	0.25	0.46	0.49	0.63	0.53
Standards.5. 1.2	-0.01	-0.04	0.11	0.28	0.25	0.52	0.39
Standards.5. 1.3	0.22	0.24	0.20	0.40	0.40	0.47	0.53
Standards.5. 1.4	0.03	-0.07	0.09	0.29	0.40	0.50	0.40
Standards.5. 2.1	0.17	0.00	0.06	0.12	0.30	0.19	0.26
Standards.5. 2.2	0.30	0.08	0.30	0.20	0.22	0.14	0.38
Standards.5.	0.35	-0.05	0.28	0.22	0.14	0.09	0.30

2.3								
Standards.5.	0.33	0.17	0.32	0.43	0.39	0.52	0.43	
2.4								

Part3 Standard3 Patient's Information and Intervention

R-table 15 Inter-items Correlation Matrix

Item	Standards.3.1.1	Standard s.3.1.2	Standar ds.3.1.3	Standar ds.3.2.1	Standar ds.3.2.2	Standards.3.2.3
Standards.3.1.1	1.00					
Standards.3.1.2	0.79	1.00				
Standards.3.1.3	0.50	0.44	1.00			
Standards.3.2.1	0.31	0.17	0.53	1.00		
Standards.3.2.2	0.48	0.32	0.49	0.55	1.00	
Standards.3.2.3	0.43	0.37	0.25	0.38	0.59	1.00
Standards.4.1.1	-0.14	-0.08	-0.08	0.01	-0.09	-0.20
Standards.4.1.2	-0.04	-0.07	0.06	0.19	0.07	-0.04
Standards.4.2.1	0.31	0.49	0.36	0.35	0.31	0.26
Standards.4.2.2	0.53	0.50	0.28	0.40	0.40	0.44
Standards.4.2.3	0.18	0.39	0.47	0.50	0.50	0.30
Standards.4.2.4	0.40	0.23	0.48	0.24	0.57	0.37
Standards.4.2.5	0.40	0.29	0.64	0.57	0.64	0.38
Standards.4.3.1	0.47	0.33	0.69	0.65	0.56	0.44
Standards.4.3.2	0.59	0.57	0.67	0.36	0.51	0.27
Standards.4.3.3	0.60	0.44	0.36	0.35	0.59	0.55
Standards.5.1.1	0.44	0.37	0.06	0.18	0.49	0.55
Standards.5.1.2	0.31	0.22	0.13	0.13	0.38	0.37
Standards.5.1.3	0.44	0.30	0.37	0.23	0.71	0.57
Standards.5.1.4	0.50	0.32	0.23	0.10	0.44	0.29
Standards.5.2.1	0.31	0.16	0.38	0.13	0.22	0.07
Standards.5.2.2	0.28	0.19	0.40	0.31	0.25	0.30
Standards.5.2.3	0.23	0.26	0.63	0.40	0.34	0.12
Standards.5.2.4	0.52	0.45	0.24	0.13	0.34	0.48

Part 4 Standard4 Promoting Healthy Workplace

R-table 15 Inter-items Correlation Matrix

Item	Stand ards.4 .1.1	Stand ards.4 .1.2	Stand ards.4 .2.1	Stand ards.4 .2.2	Stand ards.4 .2.3	Stand ards.4 .2.4	Stand ards.4 .2.5	Stand ards.4 .3.1	Stand ards.4 .3.2	Stand ards.4 .3.3
Standard s.4.1.1	1.00	0.63	0.13	-0.24	0.14	-0.14	-0.11	-0.08	-0.15	-0.29

Standard s.4.1.2	0.63	1.00	0.05	-0.04	0.04	-0.04	0.06	0.17	0.00	-0.18
Standard s.4.2.1	0.13	0.05	1.00	0.48	0.56	0.31	0.54	0.45	0.27	0.30
Standard s.4.2.2	-0.24	-0.04	0.48	1.00	0.37	0.39	0.37	0.44	0.40	0.74
Standard s.4.2.3	0.14	0.04	0.56	0.37	1.00	0.23	0.59	0.37	0.52	0.31
Standard s.4.2.4	-0.14	-0.04	0.31	0.39	0.23	1.00	0.49	0.53	0.36	0.58
Standard s.4.2.5	-0.11	0.06	0.54	0.37	0.59	0.49	1.00	0.66	0.60	0.38
Standard s.4.3.1	-0.08	0.17	0.45	0.44	0.37	0.53	0.66	1.00	0.52	0.43
Standard s.4.3.2	-0.15	0.00	0.27	0.40	0.52	0.36	0.60	0.52	1.00	0.48
Standard s.4.3.3	-0.29	-0.18	0.30	0.74	0.31	0.58	0.38	0.43	0.48	1.00
Standard s.5.1.1	-0.12	0.07	0.17	0.30	0.24	0.40	0.38	0.16	0.08	0.39
Standard s.5.1.2	-0.26	-0.12	0.09	0.53	0.23	0.34	0.32	0.13	0.06	0.43
Standard s.5.1.3	-0.07	0.04	0.18	0.34	0.29	0.62	0.44	0.40	0.31	0.53
Standard s.5.1.4	0.04	0.19	0.03	0.38	0.06	0.34	0.18	0.21	0.26	0.45
Standard s.5.2.1	0.44	0.69	0.09	0.05	0.04	0.25	0.26	0.32	0.26	0.04
Standard s.5.2.2	0.07	0.04	0.20	0.47	0.28	0.39	0.29	0.58	0.21	0.40
Standard s.5.2.3	0.04	0.20	0.12	0.03	0.25	0.27	0.30	0.46	0.31	0.08
Standard s.5.2.4	-0.11	-0.09	0.18	0.25	0.00	0.12	0.21	0.29	0.26	0.28

Part 5 Standard 5 Continuity and Cooperation  
 R-table 15 Inter-items Correlation Matrix

Item	Standards.5.1.1	Standards.5.1.2	Standard s.5.1.3	Standard s.5.1.4	Standard s.5.2.1	Standard s.5.2.2	Standard s.5.2.3	Standard s.5.2.4
	.1	2						

Standards.5.1.1	1.00							
Standards.5.1.2	0.61	1.00						
Standards.5.1.3	0.60	0.54	1.00					
Standards.5.1.4	0.46	0.51	0.67	1.00				
Standards.5.2.1	0.16	-0.02	0.34	0.40	1.00			
Standards.5.2.2	0.00	0.31	0.38	0.29	0.25	1.00		
Standards.5.2.3	-0.01	0.00	0.19	0.00	0.30	0.27	1.00	
Standards.5.2.4	0.26	0.10	0.26	0.19	0.11	0.11	0.26	1.00

The Correlation Matrix of standards, domains and items of Chinese Vision WHOSATHPH

R-table Inter-standard Correlation Matrix

	TOTAL	standard1	Standard2	standard3	standard4	Standard5
TOTAL	1					
standard1	0.78	1				
Standard2	0.86	0.59	1			
standard3	0.93	0.63	0.83	1		
standard4	0.87	0.64	0.6	0.79	1	
Standard5	0.8	0.39	0.69	0.73	0.61	1

## Fengqiong (Jane) Zhou

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- Récipiendaire du **Prix national de science technique** décerné par le Ministère chinois de la Statistique en 2000
- **Près de 5 années d'expérience** en **recherches et enquêtes** incluant de la **coordination** et de la **gestion de projets**
- Excellente connaissance des **méthodes quantitatives** et des **principales analyses statistiques** appliquées aux enquêtes populationnelles
- **Près de 10 ans d'expérience** dans le **domaine médical** et de la **gestion de la santé**
- Bonnes capacités de **résolution de problèmes** et de **communication**
- **Gestionnaire chevronnée** ayant le **sens des responsabilités** et l'**esprit d'équipe**

### Expérience professionnelle

Chercheure-étudiante

Département d'Administration de la Santé

UNIVERSITE DE MONTREAL, Montréal (Canada)

2007 - 2009

Faculté de la santé publique, Département de Bio-Statistique

UNIVERSITE SUN YAT-SEN, Guangzhou (Chine)

1995 - 1997

Faculté de la Santé Publique

UNIVERSITE MEDICALE DU XINJIANG, Ürümqi (Chine)

1991 - 1992

- Responsable d'un projet de recherche international visant à développer une version chinoise de l'outil OMS d'auto-évaluation pour la promotion de la santé en milieu hospitalier (2007-2009)

- Responsable du projet « *Développer un outil d'évaluation de la qualité de vie des personnes diabétiques chinoises* » (1996-1997)

- Membre principal de l'équipe de recherche internationale chargée du projet « *Développement d'instruments OMS de qualité de vie (IOMSQV)* », section de la Chine (1995)

\* *Projet financé par l'OMS et la Commission nationale chinoise de la Science et de la technologie dans un contexte où la version chinoise de l'IOMSQV est la norme officielle pour évaluer la qualité de vie de la population chinoise et son modèle spécial pour les diabétiques est accepté par de plus en plus de médecins et de chercheurs chinois*

- Participation au projet national « *Recherche sur les besoins en nutrition spéciale centrée sur les individus régulièrement soumis à des températures élevées et de fort niveaux de pollution sonore au Xinjiang* » (1991-1992)

## Expérience professionnelle - suite

**Chargé de cours bio-statistiques** 1996  
Faculté de la santé publique, Département de Bio-Statistique  
UNIVERSITE SUN YAT-SEN, Guangzhou (Chine)

**Directrice d'administration** 2000 - 2003  
**Manager Supérieure** 1997 - 2000  
Département d'Administration  
Premier Hôpital d'enseignement affilié  
UNIVERSITE SUN YAT-SEN, Guangzhou (Chine)

**Médecin** (chirurgie, pédiatrie et gynécologie) 1992 - 1994  
HOPITAL DE TRAVAILLEUR DE LA CONSTRUCTION DU XINJIANG, Ürümqi (Chine)

## Compétences professionnelles

- Conception, planification et mise en œuvre d'activités nécessaires à la réalisation d'enquêtes sur des projets internationaux impliquant des collaborations entre chercheurs issus de milieux culturels différents
- Coordination de l'évaluation de programmes implantés ainsi que de projets de recherche : Rédaction de protocoles de recherche, revues de la littérature, coordination de collectes de données, proposition de méthodologies, développement et validation d'instruments de mesure qualitatifs (grille d'entrevue) et quantitatifs (questionnaires), analyse des données, rédaction de rapports, développement de nouveaux indicateurs, transfert de connaissance (rapports, articles scientifiques et présentations orales)
- Planification et organisation de rencontres de comités régionaux, provinciaux et nationaux

## Formation

**Maitrise (MSc.) en Gestion et évaluation du service de la santé** 2009  
Département d'Administration de la Santé, Université de Montréal (Canada)

**Maitrise (MSc.) Diplôme en Bio-Statistiques** 1997  
Faculté de Santé Publique, Université Sun Yat-sen (Chine)

**Baccalauréat (B Sc.) Diplôme en Médecine de Santé Publique** 1992

Faculté de Santé Publique, Université Médicale du Xinjiang (Chine)

## Prix

<b>Bourse pour recherches méritoires</b> Club des femmes universitaires	<b>2008</b>
<b>Bourse pour la recherche internationale</b> Université de Montréal	<b>2008</b>
<b>Prix national de science technique</b> Ministère chinois de la statistique	<b>2000</b>
<b>Prix de compétition d'allocution</b> Université Sun Yat-sen	<b>1996</b>

## Publications

Zhou, Fengqiong (2001), *Méthodes d'analyse pour évaluer la qualité des services médicaux dispensés aux patients externes*, Journal chinois d'Administration Hospitalière.

Zhou, Fengqiong & Fang, Jiqian, et al (2000), *Développement d'un instrument de mesure pour évaluer la qualité de vie des diabétiques* publié dans *Méthodologie d'évaluation et d'application de la qualité de vie*, Presse de l'Université de Beijing.

Zhou, Fengqiong & Liao, Zhener (octobre 2000), *Analyse multivariable pour l'évaluation de la qualité de service à l'hôpital*, Journal d'administration hospitalière de la Chine.

Zhou, Fengqiong (octobre 1998), *Les défis pour développer et promouvoir la qualité des services médicaux à l'hôpital*, Journal de gestion hospitalière chinoise.

## Autres qualifications

**Connaissances informatiques** : SPSS, ACCESS, Microsoft Office (Word, Excel, PowerPoint)

**Connaissances linguistiques** : Chinois, anglais et français