

Managerial attitudes on the development of health promoting hospitals in Beijing

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SUMMARY

In 2002, the Beijing Committee for Disease Prevention launched guidelines based on the Ottawa Charter for Health Promotion on health promoting hospitals (HPHs). HPH pilot projects were then initiated, on a voluntary basis, in 44 Beijing hospitals. Evaluations have been undertaken to assess the impacts of the pilot project. This article outlines this HPH project, its development and evaluation and reports on the attitudes and contribution of hospital management as determined by questionnaires and interviews from 281 managerial employees from 106 Beijing hospitals (93 from pilot hospitals and 188 from control). The results of the evaluation indicate that long-term health promotion planning and health promotion specialized funds have been better established in

pilot hospitals than in the control group and also that the concept of HPH is better understood by managerial staff in pilot hospitals than by those in control hospitals. The main perceived barriers faced in the development of HPH are shortages of funds, personnel, time management and professional skills. To further develop HPHs in China, effort needs to be made to ensure that hospital leaders and management are considered first. If managerial staff have an appropriate understanding of the concept and principles of HPH, then it is more likely that health promotion activities can be introduced into the daily workings of hospitals, and the necessary funds, personnel and training on health promotion skills be provided.

Key words: health promoting hospitals; managerial staff attitudes; evaluation

INTRODUCTION

Subsequent to the First International Conference on Health Promotion and the drawing of the *Ottawa Charter for Health Promotion* (WHO, 1986), hospitals were identified as one of several 'settings' from which health promotion strategies should be developed and implemented. *The Budapest Declaration on Health Promoting Hospitals* (WHO, 1991), the 1993 establishment of

annual international conferences on health promoting hospitals (HPHs), the *Ljubljana Charter on Reforming Health Care* (WHO, 1996) and *The Vienna Recommendations on Health Promoting Hospitals* (WHO, 1997) contributed further momentum toward the conceptualization and development of HPH and the establishment of HPH networks, tools, guidelines, strategies and standards (Pelikan *et al.*, 2001; Whitehead, 2004; WHO/Europe, 2006).

Fundamental principles dictate that HPHs should improve well-being and empower health professionals, patients, their relatives and the community with holistic healthcare that acknowledges the diverse needs and values of different population groups, and both protects and improves the hospital environment and greater community. Quality care and improvement of hospital 'settings' and culture should go beyond curative services to health promotion through participatory, 'health-gain-oriented procedures' including changes to: communication, training, education, organizational management, policy development; and the fostering of close links between hospitals and the community (WHO, 1997).

Based on these principles, pilot projects were initiated in 44 Beijing hospitals from July 2002 (Pan *et al.*, 2005). Evaluation of the pilot project was undertaken to provide experience for future development of HPH in China and to offer a practical basis for China's entry into the WHO HPH network. The evaluation was a cross-sectional study conducted in May 2005, using questionnaires to assess experience and perceptions of respondents (outpatients, inpatients, health professionals and hospital management) in 10 pilot and non-pilot hospitals. Concurrent in-depth interviews were undertaken between March and July 2005. Multistage stratified random sampling was used in three urban (Haidian, Xicheng and Chongwen) and two suburban districts (Tongzhou and Mentougou). Outpatients, inpatients and health professionals surveyed were selected according to the grades of hospitals (to ensure their comparability). The respondents were selected from different departments in numbers proportional to the size of the hospitals.

Some aspects of this evaluation have been previously reported (Wu *et al.*, 2005; Wu *et al.*, 2006; Guo *et al.*, in press). Separate evaluations of patients and staff show that the pilot project has been successful, to some extent, in improving physical and social environments and increasing health education activities, although improvements are needed to enhance professionals' understanding of and approach to health education.

This paper gives background to the Beijing HPH project and presents the results of the investigation of attitudes and understandings of management in both pilot and non-pilot hospitals to health promotion, along with their perception of key barriers for developing HPHs.

PROJECT BACKGROUND

Policy formulation

In June 2002, a seminar on HPH was conducted by the Beijing Committee for Disease Prevention (BCDP) and attended by professionals from hospitals, health education institutes, medical universities, the Center for Disease Prevention and Control (CDC) and officers from local government. A major output of the seminar was the recommendation that officers from local government should develop a policy on HPH development in Beijing. Criteria on HPH was drafted and launched by the BCDP (Beijing Municipal Government) in July 2002. These guidelines are summarized in Table 1 and cover the five dimensions of the *Ottawa Charter*.

Project participant selection

Based on voluntary application, the 44 participating hospitals were selected by district Health Education Institutes as pilot hospitals to implement the government promulgated guidelines on HPH. For the duration of the project (5 years), the pilot hospitals were required to establish a HPH Committee, and establish or designate a specific department responsible for organizing, coordinating, supervising and evaluating the hospital's health promotion activities. While financial resources were available annually from the hospital's health education department and the Beijing Health Education Institute, to support health promotion training, pilot hospitals were also required to allocate further financial resources to support their health promotion activities. Every third-level pilot hospital was required to annually allocate US\$13 000 (100 000 RMB) and second-level pilot hospitals US\$6500 (50 000 RMB). All pilot hospitals achieved or exceeded this requirement.

Training

Late in 2002 all responsible managers from the 44 hospitals (one person from each pilot hospital) were given training on health promotion and health education. Training was also developed for staff working in the department set up to manage and coordinate health promotion activities. As training was required for all

Table 1: BCDP guidelines for HPHs

Dimensions	Items
Policy making	<ol style="list-style-type: none"> 1. HPH committees should be established within a specific department to organize, coordinate and supervise health promotion resources and activities. 2. Adoption of health education and promotion to all routine medical practice within hospitals. 3. Funding should be allocated to health promotion activities from the hospital's annual budget. 4. All doctors and nurses should conduct health education (not less than 5 minutes) for all patients visiting clinics. The information given should be relevant to the disease suffered by the patient. 5. All patients to the hospital should be offered voluntary blood pressure and blood glucose tests at their first visit. 6. Cigarette smoking, excessive alcohol drinking and tobacco sales to be forbidden in all the hospital buildings and surroundings. 7. Health promotion planning should be made annually with regard to the major health problems facing community residents. 8. All hospital staff should be encouraged to take physical exercise, lead healthy lifestyles and undergo regular physical examinations.
Environment building	<ol style="list-style-type: none"> 1. Hospitals should improve the physical infrastructure including disinfecting, indoor plants, indoor ventilation, washing and fitness facilities, etc., and appropriately dispose of medical wastes to prevent environmental pollution. 2. Hospitals should provide nutritious food for staff.
Re-orientation of health services	<ol style="list-style-type: none"> 1. Hospitals should provide treatment, health services and education including mental health, lifestyle, smoking cessation, diet, physical exercise, etc.
Health skills	<ol style="list-style-type: none"> 1. For both staff and community members, lectures and training should be conducted regularly on healthy lifestyles including smoking cessation, physical exercise, fitness, diet, etc.
Community	<ol style="list-style-type: none"> 1. Community needs assessment should be conducted regularly to determine the main health problems and risk factors for the community. 2. Hospitals should launch health education activities such as lifestyle lectures, hypertension prevention, diabetes rehabilitation, etc. 3. Medical doctors should provide disease prevention information regularly to the community through the mass media.

medical staff at the hospitals, those who received the initial municipal training then trained other staff. The training covered areas and concepts such as health education, health promotion and HPH; the Ottawa Charter; community diagnosis and 'healthy community' and prevention and management of non-communicative chronic diseases.

Annual progress report

District-level institutes of health education provided annual progress reports of HPH activities for the hospitals located in their district, as well as a final report to the BCDP. Reports were required to include information pertaining to the number and duration of health education activities, development of inner-hospital training and dissemination of health education materials. The district Health Education Institute was also required to supervise each hospital on a half-yearly basis.

Specific projects introduced

Since the HPH project began, several intervention activities have been implemented at all pilot hospitals. These include hospital-based lifestyle intervention on impaired glucose tolerance for the medical staff, smoking control, capacity-building for medical staff and community-based prevention of non-communicative chronic diseases.

EVALUATION METHODOLOGY

Hospital and subject sampling

For the present study on managerial attitude, we added one more suburban district (Miyun) to the three urban and two suburban districts where outpatients, inpatients and health professionals were surveyed, in order to achieve sufficient sample size. Our final sample of 106 hospitals included 14 pilot and 36 control hospitals in three urban districts, and 14 pilot and 42 control hospitals in three suburban districts. The 281 managerial employees who responded (100% response rate) comprised 93 from pilot hospitals and 188 from control hospitals. The number of managers interviewed in each hospital was based on a ratio of 1:3 (one manager was interviewed for every three survey respondents within a hospital); they were interviewed

Table 2: Demographic profiles of the respondents

Context		Number		Statistic	<i>p</i> -value
		The pilot	The control		
Position	Directors	27	71	2.180 ^a	0.140
	Others	66	116		
Gender	Male	35	89	2.497 ^a	0.114
	Female	58	98		
Age	~20	5	12	-1.791 ^b	0.073
	~30	17	64		
	~40	37	53		
	≥50	30	56		
	Lower than bachelor	47	113		
Education	Bachelor	37	62	-0.585 ^b	0.559
	Master	8	7		
	PhD	1	4		
	Primary	18	33		
	Median	44	105		
Post and rank	Associate professor	24	27		
	Professor	5	16		

^a χ^2 value; ^bZ value of non-parameter.

by trained researchers using a pre-constructed questionnaire.

Table 2 shows the demographic profile of the respondents. The two groups from the pilots and controls were comparable.

Questionnaire development

A questionnaire was designed as the research tool based on the criteria of HPH launched by BCDP and on a literature review. Focus group discussions were conducted in pilot and non-pilot hospitals as the basis for questionnaire construction. The questionnaire was piloted at one of the pilot hospitals (Tiantan Hospital) and assessed for validity and reliability; the α value of the questionnaire was as high as 0.828.

Interviews

Ten staff member in public health and health promotion from the Capital University of Medical Sciences and Beijing CDC acted as interviewers. All the researchers had extensive experience in field research, and all received further training on the structure and items of the questionnaire, as well as in interpersonal

communication skills. With permission from the hospital administrators, researchers made interview appointments by phone and then visited the hospitals to perform face-to-face interviews. Confidentiality was assured and respondents were asked not to discuss the nature of the interviews with other staff.

Statistical analysis

All completed questionnaires were coded and formed into a database EpiData 3.02. SPSS13.0 statistical software was used to analyze the frequency, statistical significance by rank sum test and χ^2 tests at the conventional levels of significance (0.05, 0.01 and 0.001). Comparisons were conducted between the pilot and non-pilot hospitals to test difference in perception, attitude and practice. Differences in health policy and organization in health promotion between the pilot and control hospitals were analyzed using a binary logistic regression model (P-entry = 0.15, P-removal = 0.20).

RESULTS

Health promotion policy and organization in hospital

Pilots and controls were compared on their achievements in relation to their:

- ban on smoking;
- ban on alcohol;
- long-term planning on health promotion;
- specialized funding for health promotion;
- regular disinfecting;
- classification of medical waste;
- use of specialized containers for medical waste;
- designation of smoke free and smoking zones;
- firefighting equipment;
- training of medical staff;
- training on skills of health promotion;
- provision on health education for patients by professionals and
- the taking of blood pressure measurement for patients at their first visit.

Analysis shows that the main difference between the pilot and control hospitals was in their degree of commitment to health promotion, as illustrated through the extent to

Table 3: Binary logistic regression in management policy and organization in health promotion between pilot and control hospitals

	B	SE	Wald χ^2	df	Sig.	Exp(B)	95.0%CI for EXP(B)	
							Lower	Upper
Long-term planning on health promotion	2.489	1.069	5.422	1	0.020	12.050	1.483	97.908
Specialized fund on health promotion	0.995	0.630	2.495	1	0.114	2.705	0.787	9.294
Constant	-7.232	2.201	10.797	1	0.001	0.001		

which they had long-term plans and funding set aside for health promotion. Table 3 shows the results of the binary logistic regression analysis.

The OR values of long-term planning on health promotion and specialized fund on health promotion are 12.050 (95%CI: 1.483–97.908) and 2.705 (95%CI: 0.787–9.294), respectively. These two points were better established in pilot than in control hospitals. This finding is not surprising insofar as one requirement of the pilot program was for participating hospitals to set up a steering or coordinating structure and to allocate funds. Because participation in the HPH pilot was on a voluntary basis, it might be expected that the participating pilot institutions were more interested to start with.

PERSPECTIVES OF MANAGERIAL STAFF ON HPH

Understanding of the concept of HPH

Table 4 shows the differences in understanding of the concept of HPH between managerial staff in the pilot and control hospitals: 57.8% of respondents in the pilot group reported to have understood the concept well, which is higher than in the control (38.3%), however, without statistical significance. Nonetheless, the concept of HPH is better understood by managerial staff in the pilot hospitals than that in the

control ($p = 0.002$), while substantially more control hospital managers have never heard of the HPH concept, compared to the pilot hospitals. Whether this higher level of understanding is the result of training and participation in the pilot is not clear, as pilot hospitals were not randomly selected for the program.

Attitude about need for health promotion in hospitals

Table 5 shows the differences in the attitude between the pilot and control groups on necessity of health promotion in hospitals. It shows that most managerial employees believe it is necessary to conduct health promotion in hospitals and there is no statistical significance reported between the pilot group and the control group in the belief on the need for health promotion programs for outpatients, inpatients and the community, and for improvement in physical setting of hospitals. Pilot hospital respondents believed there was need for health promotion targeted to health professionals, unlike the controls ($p = 0.038$).

Achievements and barriers for health promotion in hospitals

As shown in Table 6, comparing the reporting by managerial staff both in pilot and control hospitals, the three main changes identified by

Table 4: Managerial understanding of the concept of HPH

Hospital	Never heard of		Heard of but not understood		Understand well		Z value	p-value
	Number	Percent (%)	Number	Percent (%)	Number	Percent (%)		
The pilot	6	6.7	32	35.6	52	57.8	-3.072	0.002
The control	23	12.6	90	49.2	70	38.3		

Table 5: Attitudes on the need for health promotion in hospitals

Program target	Need	The pilot		The control		χ^2 value	<i>p</i> -value
		Number	Percent (%)	Number	Percent (%)		
Health professionals	Very much	40	43.0	57	30.5	4.307	0.038
	A little or no	53	57.0	130	69.5		
Outpatients	Very much	40	43.0	63	33.7	2.321	0.128
	A little or no	53	57.0	124	66.3		
Inpatients	Very much	38	40.9	69	37.9	0.225	0.635
	A little or no	55	59.1	113	62.1		
Community	Very much	37	39.8	69	37.3	0.162	0.687
	A little or no	56	60.2	116	62.7		
Improve the physical environment	Very much	44	47.3	74	40.0	1.354	0.245
	A little or no	49	52.7	111	60.0		

Table 6: Main changes in health promotion in hospitals

Main changes		Number	Percent (%)	χ^2 value	<i>p</i> -value
Improvement in doctor–patient relationship	Pilot	84	92.3 (84/93)	7.663	0.006
	Control	144	79.1 (144/188)		
Increased trust by patients in the hospital	Pilot	72	79.1 (72/93)	0.809	0.368
	Control	135	74.2 (135/188)		
Improvement in the physical environment of the hospital	Pilot	55	60.4 (55/93)	0.068	0.794
	Control	107	58.8 (107/188)		

managers, since health promotion was initiated in the hospital, are:

- improvement in doctor–patient relationship (92.3 versus 79.1%);
- increased trust by patients in the hospital (79.1 versus 74.2%) and
- improvement in the physical environment of the hospital (60.4 versus 58.8%).

Improvement of the doctor–patient relationship is reported at a higher frequency in the pilot hospitals than in the control ($\chi^2 = 7.663$, $p = 0.006$), whereas there is no significant difference in the other two dimensions ($\chi^2 = 0.809$, $p = 0.368$; $\chi^2 = 0.068$, $p = 0.794$, respectively).

Despite apparent achievements in the pilot hospitals, all managers identified common barriers in providing health promotion in hospitals (Table 7). The two main problems being

shortage of funds (92.3%, 87.9%) and inadequate human resources (86.3%, 85.2%). Interestingly, 41.8% of managerial staff in the pilot hospitals expressed concern about shortage in professional skills for health promotion, which is much lower than the proportion (67.2%) in the control. Pilot hospitals reported shortage of professional skills in health promotion at a lower frequency in the pilot hospitals than in the control ($\chi^2 = 16.251$, $p = 0.000$).

Suggestions for creating successful HPHs

Analysis of the open-ended questions in the questionnaire point to three main conditions, seen by hospital managers, as considered necessary for the successful implementation of HPH. First, senior level support from the outset is needed which would translate into

Table 7: Main barriers to health promotion in hospitals

Main barriers in the pilot	Number	Percent (%)	Main barriers in the control	Number	Percent (%)
Shortage in funds	84	92.3 (84/93)	Shortage in funds	158	86.3 (158/188)
Shortage in personnel	80	87.9 (80/93)	Shortage in personnel	156	85.2 (156/188)
Shortage in time	61	67.0 (61/93)	Shortage in professional skills in health promotion	123	67.2 (123/188)

funding support. Health promotion activities were reported to have been delayed in most hospitals, as the leaders in government and hospitals ignored the importance of health promotion in hospitals and put little funding toward this area. Thus, more support from the managerial staff and more funds in health promotion are considered to be the most important.

Secondly, additional staffing is required in most hospitals, especially in the controls. Health promotion departments and more specialized health promotion staff are seen to be needed if hospitals are to be involved in health promotion work.

Finally, training should be enhanced for all staff. Shortage of professional skills in health promotion is considered one of its main barriers, especially in control hospitals. Managerial staff and health professionals do not fully understand the concept of HPH and lack professional skills in health education and promotion. Regular training in content, methods and skills of health education and health promotion should be organized for managerial staff and all professionals.

DISCUSSION

As the first study of the views of managerial staff in China to evaluate the policy and organization of HPH and the attitudes of managerial employees on health promotion, the findings provide some useful lessons for future development of HPH in Beijing and elsewhere in China.

Early successes

HPH should provide holistic healthcare rather than only curative services for patients, relatives and the community. At the same time, it should implement policies that improve the health of staff and establish 'healthy' hospital organization and physical environments (Johnson and Baum, 2001). Since the HPH pilot project was initiated in Beijing in 2002, much work has been done in these areas. Previous evaluation of inpatients' perceptions suggested that physical environment, social setting and health education are better in the pilot hospitals than that in the control group (Wu *et al.*, 2005; Wu *et al.*, 2006).

From this survey, it can be seen that hospitals involved in the HPH pilot in Beijing have had some success in implementing management policies, establishing 'healthy' organization and improving hospital physical environments. This is an important foundation for developing health promotion programs. However, the differences in improved physical environment are small, which may reflect other developments in health policy. For instance, all hospitals across the country, and especially in Beijing, have benefited from recent investment in hospital construction, which applies to both pilot and control hospitals. In addition, there have been bans on smoking and alcohol within hospitals, and firefighting apparatus have been installed in most hospitals. Furthermore, since the outbreak of SARS in 2003, regular disinfecting of hospital environments and proper disposal of the medical waste have been introduced (Jiang *et al.*, 2005). Therefore it can be expected that both pilot and control hospitals have experienced improvements.

While these general changes may explain, in part, the attitudes and improvements seen in the control hospitals, what the pilot hospitals appear to do distinctively well is long-term planning on health promotion and designating specific funds for health promotion. This suggests the importance of managerial commitment from the outset, to create a foundation for health promotion work, along with a supportive organizational environment. The improvements in doctor-patient relationship, since the initiation of HPH, are also significant and the increased trust of patients in hospitals may be important for all aspects of the hospital's activities.

Remaining problems in developing HPH

Previous evaluation of patients' perspectives pointed to improvements being required in enhancing understanding of health education by health professionals, in esthetic environment, attention to psychological health and more health education programs for outpatients (Wu *et al.*, 2005; Wu *et al.*, 2006). This study, the first in China to assess the views of managerial staff and their attitudes toward HPH, highlights issues for the management of HPHs. It can be seen that many managerial employees either have limited understanding of the concept of HPH or have never heard about it. Shortages in

funds, personnel, time and professional skills in health education and health promotion also exist (Tountas *et al.*, 2004). One reason for lack of managerial interest in health promotion may be that health promotion and education does not attract immediate hospital revenue, so managerial staff overlook it, consciously or unconsciously, when planning the operational workings of the hospital. The allocation of funds and resource to curative services which can provide more immediate economic gain may be perceived to be of greater value.

How to develop more health promotion in hospitals

Whether health promotion programs for staff, patients and their relatives and the community could be initiated and implemented through the everyday work of the hospital depends to a great extent on the attitude of managerial staff and their views about the need for HPH. To provide effective health promotion programs, the fundamental principles and importance of HPH should be understood thoroughly by managerial staff, especially the hospital director. Although most managerial staff and professionals suggest that it is necessary to offer a range of health education and health promotion in hospitals, it is likely to be ignored when planning the daily activities of the hospital.

Further development of HPH in China will require that training organized for managers stress the social benefits of health promotion, as well as its ability to enhance hospital services and prestige. The social benefit can be seen when health education and promotion in hospitals leads to a decrease in the risk factors of disease and improvement in quality of life of the patients, community and staff. Furthermore, health promotion can strengthen the corporate culture, improve the doctor-patient relationship, enhance the effect of curative services, expand the influence of the hospital, heighten the reputation of the hospital, and thereby bring the economic returns desired by hospital management (Shu, 2004).

Organizational support, through policy and funding, is needed for the development of HPH; this is where the impact of leadership from managerial staff will most immediately be seen. To solve the two main problems (shortage of funds and personnel), specialized funds for health education and health promotion should

be set aside, and health promotion departments be established and staffed with professionals skilled in health promotion. These specialized personnel should offer training and support in health promotion for the entire hospital and ensure health promotion programs are implemented. Additionally, leaders of hospitals can bring health promotion into the daily workings of the hospital, draft plans on health promotion (Zhang and Qin, 1998) and regularly train the managerial employees and professional staff in fundamental principles, knowledge and approaches in health promotion, particularly in skills related to information, education and communication (Mi, 2003). Table 4 showed that shortage in professional skills of health promotion was no longer a major problem in the pilot hospitals, but a problem in the control group, which means both a successful pilot and highlights the importance of training. Regular evaluations of health promotion in hospitals are needed to ensure that concepts and strategies of HPH are implemented.

Development of HPH should be incorporated into national planning for health education and health promotion. To develop HPH, hospital management should be considered first. If managerial staff are to have an appropriate understanding of the concept and principles of HPH, then an increase in specialized funds and skilled health education and promotion personnel is more likely, along with embedding health promotion activities within the work of the hospital, including organizing regular staff training.

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