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Original Research

# Basic public health services delivered in an urban community: a qualitative study

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ARTICLE INFO

*Article history:*
Received 6 October 2009
Received in revised form
4 August 2010
Accepted 21 September 2010
Available online 8 December 2010

*Keywords:*
Public health
Community medicine
Qualitative research
China

SUMMARY

*Objectives:* To understand the advancements in and barriers to the implementation of measures to improve basic public health services in an urban Chinese community.
*Study design:* A qualitative study based on semi-structured interviews. Interviews were audio-taped, transcribed and analysed using thematic content analysis.
*Methods:* In-depth interviews were undertaken with the directors of the management centres for community health services in 15 of the 18 districts in Beijing from December 2008 to February 2009. Content analysis of the data was completed in May 2009.
*Results:* Fifteen types of free basic public health services had been delivered in Beijing. Some were supplied at a low level. An average of £2.38 per person per year was provided for inhabitants since 2008, but demand for funding far exceeded monies available. Teams consisting of general practitioners, community nurses and public health specialists delivered these services. The number of practitioners and their low levels of skill were insufficient to provide adequate services for community residents. Respondents gave recommendations of how to resolve the above problems.
*Conclusions:* In order to improve the delivery of basic public health services, it is necessary for Beijing Municipal Government to supply clear and detailed protocols, increase funding and increase the number of skilled practitioners in the community health services.
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## Introduction

Supplying free basic public health services (individual-based clinical preventive services and population-based public health services) in community settings is of great significance in improving quality of life and promoting social harmony. Since 2005, the Chinese Government has promulgated a series of documents for developing basic public health services.[1–3] These reports mandated that basic public health services would be funded at all levels of governments and be delivered by the nationwide community health services (CHS) organizations.[4] On 10 April 2009, the Chinese Government released a policy statement which enhanced the reforms of the medical and health systems, and which re-emphasized that governmental bodies will offer equitable access to basic public

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doi:10.1016/j.puhe.2010.09.003

health services for both urban and rural residents.[3] As the centre of politics, economy and culture of China, Beijing Municipal Government attaches extreme importance to and promotes advances in the development of basic public health services delivered in the community.

Over the past two decades, China has been undergoing a process of economic reform and has been relatively successful. The healthcare system, which had been reformed to suit the market economy,[5] faced multiple challenges: limited financial support from governments; high rates of catastrophic out-of-pocket spending and impoverishment through health expenses; inequalities in health and healthcare utilization; and limited financial protection even among those with insurance (a small minority of the population).[6] Due to the above challenges, the old 'three-tiered' hospital system, which involved local neighbourhood hospitals, district-wide secondary hospitals and city-wide tertiary hospitals, was forced to rely on the sales of new drugs and technologies to boost income, which resulted in expensive and inefficient care and strained patient–doctor relationships.[7] The old public health system was the responsibility of dozens of disparate institutes, centres, agencies, bureaus and departments, which resulted in overlapping and sometimes conflicting mission statements and agency mandates.[8] With an increase in life expectancy, increased burden due to chronic diseases, and the challenges of emerging infectious diseases (e.g. severe acute respiratory syndrome in 2003), the Chinese Government re-examined the public health infrastructure and saw the need for a new public health system to address the many health issues associated with these changes.[5] To minimize overlapping of functions and to increase efficiency, the Chinese Government consolidated existing institutions into a new agency: the Centres for Disease Control and Prevention (CDC). The goal of the CDC is to provide a central public health organization with responsibility for both community and individual health needs. The development of the CDC strengthened the Government's role in public health.[5] As public health and primary care share the common goal of improving the overall health of specific populations, it was decided to integrate the two systems by strengthening public health functions in primary healthcare settings. This approach could improve local public health surveillance and reinforce disease prevention and health promotion.[9] In order to resolve the problems of the increasing burden of healthcare expenses and limited access to health services, the Chinese Government initiated its CHS programme in 1997.[4] The 'three-tiered' hospital system was replaced by the current 'two-tiered' CHS centre system. The new system consists of ambulatory care in CHS centres and inpatient care in referral hospitals.[7] The main roles of the CHS centres are to provide high-quality, affordable, accessible primary health care and public health services to community residents.

The scope of services of the CHS centres is described symbolically by the Chinese Government as 'one body, six aspects'. The body is the CHS centre. The six aspects consist of basic clinical services, prevention, health education, women and children's care, elderly care, immunizations and physical rehabilitation.[7] The centres integrate Western and traditional Chinese medicine. In the population-based public health services, there is collaboration between the community health centres and the local CDC.[7] Local governments are the main sources of funding for the local CDC and CHS centres. The core providers in the CHS centres are general practitioners (family doctors),[10,11] public health specialists and community nurses. These practitioners are responsible for the provision of basic clinical services and for maintaining the wellness of the residents, of all ages, in their communities.[4]

In China, a general practitioner is a medical practitioner with recognized general training, experience and skills, who provides and co-ordinates comprehensive medical care for individuals, families and communities.[10,11] Two models are currently being used to train general practitioners in China. The first model is a 3-year general practice postgraduate residency training programme. The second model of education involves retraining the majority of the less-educated doctors currently working in local community health centres, and transforming them into general practitioners. Completion certificates are awarded by different organizations, including the Central Ministry of Health, provincial ministries of health and city-level health bureaus.[10,11] General practitioners typically work in the clinics of CHS organizations. When delivering population-based public health services, general practitioners often work in teams with public health specialists, community nurses and other providers.[10,11]

In 2007, in order to implement the CHS more effectively, Beijing Management Centre for Community Health Services (MCCHS) was established. It is affiliated administratively with Beijing Municipal Health Bureau. Similarly, a district office of the MCCHS is attached to each of the city's 18 district health bureaus.[12]

The main responsibilities of Beijing MCCHS include writing regulations, establishing assessment standards, and organizing practices for the CHS while, at the same time, supervising the work of the district MCCHSs. The district MCCHSs are responsible for planning, managing and assessing the work performed by all CHS organizations in their respective districts. Each director of a district MCCHS must be familiar with the activities of the CHS in his/her district.[12]

Fifteen types of free basic public health services have been delivered by the CHS in Beijing since 2006[13] (Appendix 1). To date, no research has investigated the implementation of these services in Beijing. Due to an interest in understanding the status of and barriers to basic public health services in the Beijing communities, the authors chose to design a study that would investigate the conceptual frameworks of these services. To that end, all 18 MCCHS district directors were approached in order to ascertain their opinions of the quality of the delivery of basic public health services by providers in the CHS.

## Methods

### *Participants and setting*

Sampling consisted of all 18 directors from the 18 MCCHS distributed in the 18 districts in Beijing. After obtaining their numbers from the telephone book, initial contact was made with them. One director was away on business, one was too busy and declined to be interviewed, and one was unable to be reached, despite multiple calls. Semi-structured, in-depth

interviews were conducted with the remaining 15 MCCHS district directors who were familiar with the work in the CHS. Interviews were usually carried out in the respondent's work offices.

All participants were informed about the purpose of the study and were made aware that they could stop the interview at any point without giving a reason. Written informed consent and an agreement for the use of anonymised quotes from the interviews were obtained from all participants.

### Semi-structured interviews

Semi-structured, face-to-face, tape-recorded, qualitative interviews, lasting 60–90 mins, were conducted by trained professional interviewers from December 2008 to February 2009. Interviewers took extensive notes, in addition to tape recording and transcribing the interviews. The transcripts were reviewed by the research team. Analysis and interpretation were reached by consensus, using an iterative process in the research team meetings. The research team was a multidisciplinary group including two community-based medical researchers with qualitative and social research experience, one health administrator from a health bureau familiar with health policy, one family doctor familiar with the CHS, two epidemiologists and one Masters degree candidate with a family medicine degree. The variety of perspectives of the team ensured a depth of understanding critical to the design of the study and the validity of the results.

An interview guide was developed on the basis of references and relevant government documents. The interview questions were open-ended and covered issues about basic public health services, the content of specific services being delivered, funding, types of providers, and general insights of the respondents.

### Analysis

Qualitative content analysis[14,15] was used to analyse the data between March 2009 and May 2009. The data consisted of rich text files containing transcripts of the tape-recorded interviews. The team members read all the material through several times to obtain a sense of the whole, and then independently coded transcripts to identify themes by condensing and summarizing the contents. Coding differences were resolved after thorough discussion in order to ensure that all perspectives on the themes were represented in the written results. The themes that emerged for the purposes of this report included the content of basic public health services, funding support, providers and recommendations. All of the interviews were included in the analysis; there were no disconfirming cases.

## Results

### Themes from interviews

The findings relate to three main themes: the content of basic public health services, funding support for basic public health services, and the providers who deliver basic public health services.

#### Content of services

Fifteen types of basic public health services, including 78 specific services (Appendix 1), were delivered at different levels in the various districts. Among these services, most of the directors considered the establishment of health records, chronic disease management, childhood immunizations and care, maternal care, elderly care, disability and rehabilitation services, and health education to be supplied at high levels. However, the provision of mental health, ophthalmologic, oral health, pest control and endemic disease services were low and sporadic in some communities due to the low level of staff competency for these tasks.

In community health information management, community needs assessments were one of the important jobs in the community. The 15 directors agreed that it was often necessary for community needs assessments to be undertaken with the assistance of a special research group due to practitioners' limited research skills in this area. The rates of creation of paper health records for all inhabitants were estimated to be high. At present, the governments have attached importance to the development of electronic health records, and the transformation from paper to electronic records is a slow, stepwise process in the communities:

> *"Paper health records have been established for 70% of people in our district, and we plan to complete this work for all our residents by 2010."*

> *"The Municipal Government required CHS organizations to establish paper health records for all residents in Beijing. A centre provides services to about 30,000–100,000 residents according to the size of a region. In fact, due to health workforce shortages and a small number of revisiting patients, only 30% of established paper records can be followed up and used continuously."*

> *"How to continuously and dynamically use these health records, especially those of healthy people, is a 'Gordian knot'... A feasible method to resolve this problem may be by using an electronic health record information systems to reduce the time spent on paperwork... The first thing that the governments need to do is to establish the standards of electronic record systems and to make experiments in some districts."*

Regarding the management of communicable diseases, most of the CHS organizations' roles are limited to assisting the local CDCs with the completion of tasks such as finding, reporting and follow-up of cases:

> *"However, for responses to emergent public health hazards, CHS organizations are playing more and more important roles."*

The management of chronic, non-communicable diseases is an important job for CHS organizations because of the high incidence and deleterious effects of these illnesses. Providing optimal health care for persons with chronic conditions is a major concern in the community. Beijing Municipal Health Bureau has established a set of guidelines for the management of chronic diseases in community

settings – including hypertension, diabetes, stroke and heart disease – and requires general practitioners to use these guidelines when managing chronic diseases. However, deficiencies in continuous professional development and a lack of evidence-based guidelines have created further problems in delivering cost-effective interventions for chronic disease prevention:

> *"The rate of adherence to these guidelines is low due to poor understanding and co-operation… It is necessary to make recommendations for these diseases by means of a process of critical appraisal and consensus building."*

Regarding maternal and child care, the interviewees said that CHS organizations assisted local women's and children's health organizations in carrying out related programmes, such as health education and counselling, screening, follow-up and referral:

> *"Childhood immunizations were implemented at the highest rate… It is estimated to be 98–100%."*

> *"Now, cost-free screenings for breast cancer and cervical cancer for adult women are delivered in some districts according to local government's regulations."*

When asked about geriatric care and care of persons with disabilities, all 15 directors replied that the instruction of self-care and the management of chronic diseases were emphasized for the elderly, and that exercise sites have been gradually upgraded by supplying physical rehabilitation equipment for disabled people.

Health education is delivered regularly in the context of supplying other health services. Most of the respondents agreed that illness-oriented visits were the most important opportunities to deliver health habit counselling and education to patients, but that this was done less frequently during health maintenance visits. The directors agreed that tobacco cessation counselling and exercise advice were the most common health education topics covered by doctors and patients during illness visits.

*Funding support*

An average of £2.38 (at a conversion rate of 10.49 RMB to £1) per person per year was provided for basic public health services in Beijing since 2008, and each district government supplied different amounts of money for basic public health services in its communities according to its economic level and population. However, basic public health services were often perceived as not being reimbursed proportionately to the amount of time expended, particularly when they were opportunistically added to illness visits. The 15 directors conveyed the opinion that funding for basic public health services was insufficient, and that most of the funds were spent on correlative public equipment and expendable items:

> *"Few financial incentives are paid to the individual health services…This may be an important reason why we can't motivate providers to deliver more and higher-quality basic public health services."*

> *"There is a higher percentage of migrants in some districts such as Chaoyang, Fengtai and Haidian, but no exact budget support from Beijing Municipal Government for migrants except immunizations. Part of public health services, such as health education, communicable diseases management are delivered for migrants in some districts, financed only by local government… The Municipal Government needs to think over the problems brought by migrants."*

*Providers who deliver basic public health services*

Teams consisting mainly of general practitioners, community nurses and public health specialists deliver basic public health services in the community. In addition to supplying medical care, general practitioners are required to delivery cost-free clinical preventive services for individuals and families, and population-based public health services (Appendix 1). Their roles include being exemplars for health; providing assessments; serving as educators, counsellors and evaluators; and making referrals when necessary. Public health specialists, who serve as recorders of health data as well as health educators, are responsible for public health services for populations in their communities. Community nurses mainly assist general practitioners and public health specialists.

> *"Basic public health services often were actually delivered by allied health professionals who may be more effective than physicians in initiating and carrying out many public interventions."*

Due to the broad scope of basic public health services and limited financial incentives, providers felt that they were under great stress and harried by many competing demands for their time. It is unrealistic to expect that basic public health services would be improved by placing additional burdens on providers without removing other demands:

> *"Time constraints and the short supply of public health service providers are barriers to the delivery of prevention. Furthermore, there are considerable gaps in knowledge and experience about public health among community providers. Most of them don't realize the importance of delivering public health services for residents in community… Individuals charged with making policy recommendations and increasing the delivery of basic public health services must acknowledge this fact."*

Medical staff in community settings often complained that community members for whom they were responsible did not trust them as these clinicians had lower levels of knowledge and skill than specialists. As a result, community members are often reluctant to accept basic public health services:

> *"Young people especially, who seldom see general practitioners, do not know clearly which basic public health services are supplied by CHS organizations. As a result, they often do not trust and refuse these community-based services, so patient non-compliance is one of the chief constraints to the improvement of basic public health services."*

### Observations/recommendations based on themes

*Elucidating the content of services*

The directors complained that some public health services, such as aspects of mental health care, pest control and endemic disease management, should have been supplied by other organizations but were passed off on the CHS. As staff competency for these tasks is low, the quality of these services is low as a consequence. Basic public health services delivered in the community should be creative, adaptive and responsive to local needs and expectations, including those of patients, community, local healthcare institutions, staff and doctors.[16] It is necessary for Beijing Municipal Government to further elucidate the content of basic public health services and define the priorities in which services need to be delivered according to the needs of local practices, their patients and their communities:

> "*Certainly, it is difficult for medical staff in the community to deliver so many public health services with high levels of quality … The governments should prioritize the delivery of services according to patients' risk factors and preferences, practical considerations and financial budget.*"

*Supplying sufficient funding for services*

Beijing Municipal Government is planning to increase funding for basic public health services to £4 per person in 2010. The 15 directors considered that this was still insufficient and advised that the Municipal Government should increase providers' salaries and subsidies. For example, an additional duty hour allowance scheme should be brought forward, under which health workers would be allowed to work extra hours and receive pay to augment their salaries:[17]

> "*Besides payment, of course, some changes in the process and organization of the providers' work are also part of the solution to the problem of the under-provision of basic public health services…A useful solution to attract more community residents to see general practitioners would be to increase the proportion of medical reimbursement for CHS services.*"

*Recruiting more competent medical staff*

There were 16.33 million residents and 5.55 million migrants in Beijing in 2007. In 2008, the total number of medical staff in the entire Beijing community was 24,740 (source: Beijing Statistical Bureau, 2008).[33] Of these, 3451 were general practitioners, 2299 were public health workers (including 765 public health specialists) and 4667 were nurses. Staffing patterns differed from district to district. However, there was consensus among the directors that more medical staff need to be allocated to CHS organizations.

There is a large disparity between general practitioners and specialists in salary and opportunities for promotion. Many doctors and nurses with better educational backgrounds or higher professional titles prefer to work in hospitals.[4] It is difficult to recruit competent medical staff in the community. The directors advised that the governments can attempt to attract better qualified doctors to work in the CHS by raising salaries, providing more opportunities to participate in continuing medical education programmes and academic conferences, and shortening tenure periods for promotion to higher professional titles. In addition, emphasis was placed on the need to increase team work among CHS workers or between CHS providers and hospital-based specialists.

## Discussion

China has made great efforts to improve the health of its huge population, and has had considerable success in this endeavour. For example, longevity has increased. Compared with 35 years in 1949, life expectancy had increased to 73 years in both sexes in 2006 (source: Ministry of Health of China, World Health Organization, 2008).[34,35] However, excessive healthcare costs and inconvenient access to health care are still major healthcare problems in China.[4] In order to resolve these problems, China has initiated a new approach[3] which includes improving primary healthcare facilities and offering equitable access to basic public health services across the country. Many provinces and cities have followed these regulations and are devoted to developing core community-based public health services. Accordingly, Beijing Municipal Government has drawn up a series of protocols[18–20] to support basic public health services for its residents.

As the tie that links district governments and CHS organizations, the 18 district MCCHSs are at the front line of implementation of the plan to deliver basic public health services in community settings. This study found much valuable information by interviewing the directors of the MCCHSs.

The Chinese Government is supplying nine types of basic public health services, including 21 specific services, at no cost for all people since 2009 according to its announcement.[3] Since 2006, CHS organizations in Beijing have supplied more basic public health services for residents than those required by the national plan, and basic public health services are regarded as part of a core mission in general practice. However, the delivery of some of these basic public health services was at lower levels of quality than is desirable. This finding is consistent with the reports of other researchers about preventive services delivery in other countries.[16,21] In general, locally tailored interventions are more likely to be adopted into the usual routines of practice than interventional approaches that are dependent on outside stimuli (such as financial incentives),[22] or which impose practice tools and approaches developed elsewhere.[23] It is imperative to undertake more research to find ways to make these improvements.[24]

According to a 2009 policy statement,[3] the Chinese Government and local governments at all levels will provide financial outlays that are not less than £1.43 per person per year for basic public health services for all Chinese people in 2009, and increase subsidies to achieve universal insurance coverage and to assure every citizen equal access to affordable basic health care.[25] At present, the governments are putting this statement into practice. A baseline survey of CHS organizations in 29 cities in 2008[26] showed that Shanghai was the most highly funded, at £4.77 per person per year for basic public health services. On the other hand, in 2006, some less developed cities only supplied funds of £0.48 per person per

year. The budget in Beijing is £2.38 per person per year since 2008; however, Beijing CHS centres are required to deliver more basic public health services than their counterparts in other provinces. The deficiency in funding has become such a problem that some basic public health services cannot be implemented effectively in Beijing. The Municipal Government is now assessing how much money should be devoted to basic public health services on the basis of its funding capability and the demands of stakeholders. In addition, migrants need to be recognized as a specific target group for health promotion, prevention and health care,[27] and the governments should provide additional funding for them.

These findings are consistent with research[28] which points out that multidisciplinary practice teams are key to delivering basic public health services in community settings. Successful teams are created through formulating inter-related goals, identifying measurable outcomes, systematizing routine tasks of care, defining provider tasks and roles explicitly, and providing appropriate training.[27]

A document published by the State Council of China in 2006[29] mandated that the allocation rate for medical staff working in the CHS should reach the level of two to three general practitioners and nurses per 10,000 residents, and one public health specialist per 10,000 residents by 2010. In Beijing, the allocation is one general practitioner per 3000 residents, one nurse per 25,000 residents and one public health specialist per 2000 residents.[20] In fact, the above allocation rates have not yet been met, especially since the demand for much of the scope and quality of public health services has increased. In addition, the low levels of CHS providers' knowledge and skills[4] is a major problem. As a result, basic public health services are often only provided in response to patient requests or obvious needs in Beijing; services thus tend to be reactive rather than proactive. It may simply be unrealistic to expect community providers to deliver a comprehensive package of basic public health services along with the many competing demands of providing direct clinical care.[21] In view of the reasons mentioned above, Beijing Municipal Government is planning several programmes to improve the service capabilities of the CHS providers. These include partial changes in the structure, roles and functions of the teams; incentives to attract more medical graduates to work in community settings; redistribution of tertiary hospital doctors to CHS organizations; re-employment of retired doctors in the CHS; and the provision of financial support and opportunities for younger doctors to get better continuing medical education.[4]

The roles and experiences of both medical staff and their patients also impact on health promotion activities. The community resident/patient is not a passive participant in the process of receiving basic public health services, and many residents look to providers for guidance and direction in the prevention of diseases.[30] Favourable interaction between providers and patients is critical to the effectiveness and efficiency of the delivery of basic public health services, because in some types of preventive services, the patient's contribution may ultimately be more significant than the provider's role (e.g. weight loss, smoking cessation, reduction of alcohol use, adherence to medical regimen).[30] People with insurance can access other services which are not free of charge in CHS organizations. In fact, people with insurance prefer to visit doctors in hospitals to CHS organizations. In order to attract more people to visit the CHS, CHS organizations are required to supply acceptable services by decreasing drug prices and increasing the proportion of medical reimbursement.[31] Beijing Municipal Government is currently devoting significant funding to publicizing basic public health services in the community by means of various media, and is encouraging residents with common diseases to see general practitioners.

This exploratory study provides in-depth examinations of the status and barriers of basic public health services provided in community practices. Interviews were carried out and analyzed by a multidisciplinary group in order to maintain the validity and meaningfulness of the results. Purposeful sampling was used to enhance external validity or transferability.[32] However, the findings must be interpreted in the context of the study's limitations. The data were cross-sectional in nature. The possibility that the non-responding directors were different from the 15 interviewed directors can not be excluded. The study examined basic public health services from the perspective of supervisors, who do not themselves provide direct primary medical care. It did not examine the broader frame of basic public health services in the community and overall population levels. The fact that all the data for this study were collected in one city may call into question its generalizability to other locales. However, the choice of Beijing as the site for data collection has particular significance to healthcare service delivery in China because the nation's capital was one of the first cities to comprehensively implement the CHS reforms of 2006, and thus has had the longest experience with them. In addition, Beijing has traditionally served as a national test site for reforms of the CHS. Accordingly, the authors recommend that further research should be undertaken on the delivery of basic public health services with larger sampling from community providers from other cities in China.

## Conclusions

This qualitative study suggests that the emphasis of Beijing Municipal Government on the delivery of basic public health services in community settings is an important effort, but the specific parameters for these services should be clarified, the quantity and quality of staffing must be addressed, sufficient time for provision of services must be allowed, and sufficient funding must be provided. The authors believe that major reforms of the healthcare system in Beijing and China are needed to address these problems.

### *Ethical approval*

Medical Ethics Committee of Capital Medical University.

### *Funding*

None declared.

### *Competing interests*

None declared.

## Acknowledgements

The authors wish to thank Liguang Sun for his help in coordinating work, Gang Liu for supplying some policy information for the interviews, Min Liu for sharing her expertise in the interview guide, Qiongying Wang for her help in organizing the data, and Kenneth Kushner and O. Daniel Smith for their astute editorial suggestions. The authors would also like to thank the participating directors for their contributions to this project and their commitments in the study.


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## Appendix 1.

Free basic public health services delivered in community health services organizations in 15 districts in Beijing since 2006.

| Content | Item |
|---|---|
| 1. Community health information management | 1.1 Community needs assessments |
| | 1.2 Establishment of health records |
| | 1.3 Supplying continuing services for personal and family health by signing contract between doctors and patients |
| | 1.4 Birth and death certificates |
| | 1.5 Death cause survey |
| | 1.6 Screening, assessment and intervention of patient risk factors |
| 2. Communicable diseases management | 2.1 Public and professional education |
| | 2.2 Communicable disease discovery, registration and reporting to local CDC |
| | 2.3 Follow-up |
| | 2.4 Assisting local public health institutions to control outbreaks |
| | 2.5 Disinfection management |
| | 2.6 Prevention, treatment and referral services |
| 3. Response to emergent public health hazards | 3.1 Public and professional education |
| | 3.2 Assisting the local CDC to control spread of emergent public health hazards |
| 4. Chronic diseases management | 4.1 Health education and self-management |
| | 4.2 Hypertension, diabetes, stroke, heart disease and cancer screening |
| | 4.3 Health record establishment |
| | 4.4 Disease surveillance and management |
| | 4.5 Follow-up |
| | 4.6 Health promotion |
| 5. Mental health | 5.1 Provide information on stress management, public and professional education |
| | 5.2 Primary screening (recognition and reporting of early symptoms of mental health problems) |
| | 5.3 Registering and reporting to local psychiatric institutes |
| | 5.4 Follow-up |
| | 5.5 Referrals to other health and social services |
| | 5.6 Free drugs supplied for poor patients with mental health problems |
| | 5.7 Disease monitoring and rehabilitation |
| | 5.8 Provision of mental health counselling |
| 6. Management of ophthalmalogic and oral health | 6.1 Health education/consultation |
| | 6.2 Screening |
| | 6.3 Establishment of record |
| 7. Pest management | 7.1 Health education/consultation |
| | 7.2 Assisting the local CDC in screening, registering, reporting, prevention and treatment |
| 8. Endemic management | 8.1 Health education/consultation |
| | 8.2 Assisting local CDC in screening, registering, reporting, prevention and treatment |
| 9. Immunizations | 9.1 Health education/consultation |
| | 9.2 Establishment of records |
| | 9.3 Immunization [DPT ($\leq$6), polio, measles, BCG, hepatits B virus vaccine] |
| | 9.4 Emergent vaccination and supplementary immunization |
| | 9.5 Registering, checking and assessing data |
| | 9.6 Vaccine administration |
| | 9.7 Dealing with side-effects |

**Appendix 1 (*continued*)**

| Content | Item |
|---|---|
| 10. Child care (children's care) | 10.1 Education and consultation |
| | 10.2 Records establishment |
| | 10.3 Follow-up |
| | 10.4 Intelligence, dental, hearing and vision screenings |
| | 10.5 Growth and development assessment, monitoring and counselling |
| | 10.6 Psychological development counselling |
| | 10.7 Health status assessments |
| | 10.8 Nutritional counselling |
| | 10.9 Communicable diseases reporting and management in preschools |
| | 10.10 Disinfection management in preschools |
| 11. Maternal care (women's care) | 11.1 Public awareness and professional education, providing health advice and support to young mothers |
| | 11.2 Establishing records |
| | 11.3 Examination of early pregnancy |
| | 11.4 Perinatal high-risk management |
| | 11.5 Follow-up of the prenatal and postpartum periods |
| | 11.6 Prenatal/postpartum care |
| | 11.7 Referrals |
| | 11.8 Gynaecologic diseases, breast and cervical cancer screenings |
| 12. Family planning | 12.1 Education and consultation |
| | 12.2 Provision of information on contraception |
| | 12.3 Financing contraception |
| | 12.4 Surgery for birth control |
| 13. Elderly care (more than 60 community groups) | 13.1 Education for disease prevention and self-care |
| | 13.2 Health record establishment |
| | 13.3 Common chronic disease screening |
| 14. Service of disability and rehabilitation in community | 14.1 Spreading of rehabilitation knowledge |
| | 14.2 Establishment of records |
| | 14.3 Basic exercising for the disabled |
| | 14.4 Referrals |
| | 14.5 Survey of rehabilitation demands |
| 15. Health education | 15.1 Help people to develop their understanding and skills to improve their own health |
| | 15.2 Raising public awareness of the early symptoms of diseases |
| | 15.3 Reduction in inappropriate antibiotic use |
| | 15.4 Multitopic health promotion campaigns |
| | 15.5 Lifestyle advice |
| | 15.6 Provide health advice on self-care |

CDC, Centre for Disease Control and Prevention. Source: Beijing Municipal Bureau, 2006[18]