

Assessment Report
on Hubei Provincial Health Information System

Department of Health , Hubei Province

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Introduction

Hubei is one of the provinces applying Health Metrics Network (HMN) assessment tools to assess the provincial level health information systems. The Health Department of Hubei Province pays much attention to this assessment activity. According to the requirements from Center for Health Statistical Information(CHSI), Ministry of Health and Health Metrics Network of World Health Organization on this project, Hubei Provincial Health Information Center organized and completed the early-stage investigation, research, discussion, and implementation of assessment and drafting of assessment report.

In December of 2005, CHSI staff came to Hubei Province for early-phase survey and research for HMN project. In September 2006, Hubei Provincial Health Information Center, under the direction of CHSI, organized a meeting attended by leaders and experts of relevant departments. The meeting made an assessment of Hubei Provincial Health Information System by applying HMN assessment tool. Leaders of Health Department of Hubei Province paid much attention to the meeting. Two vice directors of Health Department of Hubei Province, Hu Juping and Yang Xuchun, attended the meeting and participated in the assessment discussion. A summary of assessment result is as follow:

Advantages: Hubei Province has relevant systems for health information collection, processing and utilization; has established health informatization leading group, strengthened human resource and ability, established an information transmission platform for transmitting public documents and information among health administrations, which is also called group office system of health department; established a health information database that can be upgraded in time, and possesses relatively perfect disease surveillance system.

Existing problems: Because of unbalanced development of economy and suchlike reasons, there are still many problems existing in current health information system, mainly including bad local infrastructural construction, inadequate stress on information system construction both in implementation process and in resource allocation, poor ability in data source synthesis, information isolation, short of information exchange and share among different departments, low data quality and utilization ratio, and limited functions of health information system.

Background

1. Assessment Process

Hubei Provincial Health Information Center organized a workshop, and participants included managers, experts and scholars from relevant administrative departments and institutes. The workshop assessed the current situation of Hubei Provincial Health Information system by applying HMN assessment tool on September 07, 2006.

Participants mainly came from following units: Hubei Province Development and Reform Commission, Hubei Province Finance Department, Hubei Province Statistics Bureau, Hubei

Province Family Planning Commission, Hubei Province Labor and Social Security Department, Hubei Province Information Center and other governmental departments; Department Office, Planning and Finance Department, Medical Affairs Department, Disease Control Department, Maternal and Child Health Department, Chinese Medicine Department, Health Legislation and Supervision Department, Human Resource Department, International Cooperation and Communication Department, Snail Fever Prevention and Cure Office, Public Medical and Health Office, Patriotic Health Campaign Committee Office and Logistics Center of the Health Department of Hubei Province; Hubei Provincial Health Information Center; Hubei Province Disease Prevention and Control Center; Hubei Province Health Supervision Bureau; Wuhan Municipal Health Bureau, Jingzhou Municipal Health Bureau; Wuhan Municipal Disease Prevention and Control Center; Hubei Province People's Hospital; Hubei Province Chinese Medicine Hospital; Wuhan Municipal Central Hospital; Medical School of Huazhong University of Science and Technology; Medical School of Wuhan University and etc. Two vice directors of the Health Department of Hubei Province, Hu Juping and Yang Xuchun, attended the meeting and participated in assessment.

Interactive group discussion is adopted as the assessment method. The discussion groups are divided into policy group and technical group. Each group discusses about the items one by one firstly, and then scores each item after getting a unanimous opinion. Finally, integrate two groups' opinions to get a final assessment result.

2. Population, society and economy

Hubei Province has 12 cities at prefecture level, 1 autonomous prefecture, 3 cities under the province direct control and 1 forest district , and 24 cities at county level, 39 counties, 38 districts under the city and 954 towns. In 2005, total population of the province was 60.31 million , birth rate was 8.74‰ , death rate was 5.69‰ , population natural growth rate was 3.05‰.

In 2005, regional GDP of the province was 652.014 billion yuan , per capita GDP was 11,430 yuan. Average per capita disposable income of town residents was 8,786 RMB, average per capita net income of countryside residents was 3,099 yuan.

3. Health resources

By end of 2005, the total number of health institutions of the province was 9,459, of which : 574 hospitals ;1,176 clinics ;88 community service centers ;96 women and children health care hospitals (offices and stations) ; 113 disease prevention and control centers (including

epidemic prevention stations) ; 63 health supervision offices.

By end of 2005, every 1,000 population in the province have 2.31 beds. Total number of health employees in the province reached 262,000, among them, 21.5% is health professional employees. 88,000 are licensed physicians and assistant physicians in the province, 69,000 are registered nurses. The number of licensed (assistant) physicians and registered nurses per 1,000 population is 1.48 and 1.15 respectively.

4. Health information system

4.1 Organizational framework

Health Department of Hubei Province has set up Health Informatization Leading Group, which holds 3~5 meetings every year to study and review the health informatization scheme of the province. The Health Department has also set up the Provincial Health Information Center, which is concretely responsible for preparing the general target and planning for the health informatization construction work of the province, and conducting review and management on the key project of health informatization construction of the province ; Be responsible for the preparation and approval for the health information industry standard of the province ; Be responsible for leading, organizing and coordinating the collection, management and supervision on the health information resources of the province, and preparing the construction standard of the health information system of the province.

4.2 Infrastructure

Health Department of Hubei Province OA group office system users have exceeded 500, per capita possessing quantity of computer of health administrative departments at province level is 1 set, 0.7 set at prefecture and city level and 0.5 set at county level.

Health Department of Hubei Province door-web site of began operating in 2003, which has become the administrative door web site of our department for providing governing affairs information opening and convenient to the public for handling affairs. Health administrative departments of 17 prefectures and cities of the province have set up their own door web sites, 16 prefectures and cities have set up these stations, and realized the linking with the web sites of Health Department of Hubei Province. Medical health institutions of every area have consecutively set up their door web sites, and realized the opening of related information. The whole province has preliminarily formed an open Internet health information opening platform.

Health Department of Hubei Province administrative system was established in Nov. 2004, and put into use in the health bureaus of cities and prefectures, and medical health units directly below the ministry and the province. Up to this moment, the system has covered all employees of the

Department organs, the access users of health bureaus, health supervision bureaus, disease prevention and control centers, health offices, cooperation management offices and others of all cities, prefectures, county (city, districts) of the province have exceeded 500. This system has realized office document exchange inside the Health Department organs and electronic documents, information transmission, submitting statement and other function inside the health system of the province.

90% of county hospitals or above in the province have set up hospital information management system, and some medical health institutes have set up door web sites, used for information releasing and inquiry services. Informatization construction in medical institutes mainly focuses particularly on hospital HIS, medical expense settlement and hospital management, etc. But the data sharing between medical hospitals is limited, and information isolated island phenomenon is quite universal.

4.3 Human resources

Health administrative institutes at provincial level have their own full-time (part-time) health information personnel; all hospitals, CDC and health supervision offices have full time health information personnel, clinics have part-time health information personnel, other medical health institutions have corresponding positions, equipped with full time or part-time personnel.

Medical health institutions pay great attention to the construction of informatization personnel, most of hospitals and some health clinics have offices or relevant centers working on disease statistics, most of large and medium sized hospitals have computer network center, responsible for operation and maintenance of hospital HIS and informatization construction work, but, they generally have not effective informatization personnel training and introduction mechanism.

4.4 Health information sub-system

4.4.1 Census

Hubei conducts census every 10 years, and 1% census for every 5 years, and conduct a 1% population survey every year. Census is organized by the Provincial Statistics Bureau.

4.4.2 Construction of health management information system (HMIS)

According to *China Health Statistics Survey System* and requirement of the Ministry of Health, from 2002, the province has rebuilt health information collection system-*Health Statistics Information System*, health administrative departments at the province, city and county have set up 8 basic health information databanks, including basic situation databank of the health institutions, basic information databank of health institution human resources, equipment databanks of health institutions, operation situation databanks of medical institutions, hospital leaving patients databanks, clinical databanks, village health office databanks as well as databanks of residents injury and death causes. 8 databanks will be regularly maintained and updated, through data integration and analyzing output statement, which has provided information consultation services

to the health undertaking development and governmental department making decisions in our province.

4.4.3 Hubei New Cooperative Medical Scheme (NCMS) information system

Hubei NCMS information system has been built and put into operation, now 41 counties use it, covering more than 14 million rural resident. Major functions of this system includes : 1. Provide basic information to the administrative agencies at various levels ; 2. Provide information for daily work management on the payment, hospitalization and reimbursement ; 3. Provide information releasing and policy consultation to rural residents and the public ; 4. Realize the centralized storage and resource sharing, etc. for the provincial NCMS fund, hospitalization, reimbursement, and other data information.

4.4.4 Health supervision information system

The system is aim to collect public health supervision data, supervise public health event, report the case rapidly and accurately according to county—city—province —central government, collect and generate into various kinds of related statements, in order to provide health supervision and decision making consultation, provide information to health administrative departments and managers at every level. The collected information includes food sanitation, environment sanitation, cosmetics sanitation, vocational sanitation, radiation sanitation, school sanitation, administrative rules and regulations, etc.

4.4.5 Web-based disease surveillance system

Hubei province has built the web-based reporting system of conventional infectious disease situation network, 1,800 hospitals at county level or above, and town health clinics and community health service centers in the province have realized on-line direct report infectious disease situation in September 2003. It has satisfied the requirement of pre-warning and rapid reaction. In 2005, direct report platform increased special report system of AIDS and tuberculosis.

4.5.6 Sample statistics survey of residents' injury and health cause

The sample statistics survey work of residents injury and death cause has been developed to 9 sample statistics survey points (3 urban areas and 6 rural areas) , covering population for 10.7 million, accounting to 17.7% of the total population of the province. In 2005, 58,000 death-cards were collected, and analysis were conducted according to the gender, age and area, and found residents death cause disease chart, expectancy lifetime and birth rate, mortality rate and other main health indicators in the province.

4.5.7 Maternal and child health care information system

Maternal and children health care information system is composed of the maternal and children annual data management, birth defects monitor information management, pregnant death monitor information management, child under 5-years old death monitor information. This system has covered the whole province, and the system basic data is collected by medical institutes and maternal and child health care institutions at county level or above, and recorded by the county maternal and child health care hospital.

Analysis of assessment results

1. Context, resources and process

Hubei total score is 39, which means “adequate”. The assessment result is in table 1-1.

Table 1-1 Assessment results of context, resources and process

	Number of Questions	Total possible score	Score and results	
			Scores	Results
Context, resources and process	20	60	39	Adequate
Legal and regulatory framework	5	15	10	Adequate
Human resources	7	21	12.5	Present, but not adequate
Infrastructure	4	12	7.5	Adequate
Data availability and management	4	12	9	Adequate

Advantages:

- Various kinds of rules and regulations prepared by related departments of the government have provided effective legal environment for the health information system construction, and have better rules and regulations in the aspects of health data collection, process and application, etc. Health Department of Hubei Province has established the provincial health informatization construction leading group, responsible for unifying guidance, planning, deployment, implementation, etc. for the provincial health informatization construction, simultaneously, it put forward the requirement and guideline for the standardization and implementation specification.
- Health administrative departments generally have full-time employees.
- Hubei Department of Health has set up OA system through which health information could be safely and rapidly transmitted and collected, reported to higher level managers; at the same

time, kinds of news and notices from the Hubei Department of Health could be timely issued and fed back. According to 《China Statistics Survey System》 requirement, 8 health basic information databanks and new type rural cooperative medical participators databanks have been established. NCMS participator-databanks are daily updated, the remaining databanks will be updated for 1 year or 2 years, the data validity is quite high. Some medical institutes have set up independent hospital information system, applied for its operation management.

- The health statistics indicator system in the province has basically covered the main indicators of health industry, data collection could be effectively operated, and furthermore, it has quite standardized health statistics survey system.

Existing problems:

- Though the government has strong willingness to strength health information development, it needs to be supported in terms of financial aids, standardization, supervision and coordination, etc.,

The cooperation mechanism between Provincial Statistics Bureau and Hubei Department of Health often has not yet established.

- The level of employees’ information technology and databank technique in the health administrative departments’ informatization is not so high, most of them are still in the basic application stage, lack of professional technique training.
- Large medical institutions have equipped professional information personnel, IT and databank level is comparatively high, and they are quite skillfully in the aspect of operating hospital information system, whereas, they still have no enough training, lack of the whole planning capacity for the hospital information construction.
- Health informatization construction effect at provincial level is obvious, but that of the health informatization construction at the prefecture and city level is severely lagging behind, allocation of infrastructure is not in due place, mainly lack of fund, and personnel lack of training.
- The cities have general application health databanks, but the data synthesis is quite limited.
- At present, health data collection emphasizes on health resources and medical service and the supplier information, involving little information of the party who needs it, data of family survey and life statistics has been reflected in the household survey and survey of death cause, whereas, the micro-data collection and analysis involving social economy and poverty relieving is little.
- Due to different survey modes and statistics means and other causes, we could find the data difference between different surveys, but only limited regulation for the difference could be done.

2. Assessment results of selected indicators

For each category, health status indicator is 90.5; health service coverage is 48.5 ; health system information is 45.5; risk factors is 39. Table 2-1 shows the assessment results.

Table 2-1 Health work indicator and result assessment analysis

Indicators	Number. of	Total	Assessment scores and results
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	questions	possible score	Scores	Results
Total	114	317	223.5	Adequate
Health status	45	123	90.5	Adequate
Health service coverage	27	73	48.5	Adequate
Health system information	22	66	45.5	Adequate
Risk factors	20	55	39	Adequate

Advantages:

- Acquiring data timely with good representativeness; some indicators in health status, health service coverage and risk factors can be disaggregated by sex, age, urban/rural and regions.
- Hubei province has set up the provincial maternal and child health monitoring system and vital register system which report annually new-born infant, pregnant number, infant mortality rate, pregnant mortality rate and other data. At the same time, the province has implemented the system of qualification certification and taking post with certification for the delivering personnel, thus assuring a quite high skillful birth delivering personnel delivering proportion.
- The province has set up provincial AIDS prevention office, specially responsible for the planning, deployment, coordination, supervision, et al. for AIDS across the whole province has prepared related AIDS prevention methods and working system, the work in the aspect of survey of HIV infection rate and data collection has achieved a lot. The provincial AIDS prevention office has also widely propagandized the safety of using condom in sexual behavior, and within certain range, provide free condom in order to reduce the risk of sexual behavior.
- Hubei also paid great attention on controlling tuberculosis. It has prepared professional working system, prevention plan, etc, through making great efforts, has reduced the tuberculosis incidence to a low level. At present, it emphasizes mainly on preventing and controlling the existing disease cases.
- Due to a good financial system and statistics system, it enabled the data well-collected on health expense and health manpower. Measles coverage is good since the state specification, standard and requirement is followed.

Existing problems:

- A lot of indicators have not been disaggregated by social economic status;
- Though data statistics survey in maternal and child health across the province, it has not the life statistics of death medical certification.
- Per capital private health expense has been reflected in the household service survey, the survey period is once for every 5 years. Data audit trail is not available
- For the risk factor indicator, at present, Hubei has not emphasized on adult smoking rate, therefore, the data collection work done in this aspect is limited. Improved water supply is mainly counted by the governmental administrative department, the data collection method is not according to household survey mode, and the consistency is not good.

- “Proportion of children sleeping under insecticide treated bednets”, “Obesity in adults” have not been involved. The first one is not necessary for Hubei, and the second one is the problem which has not been paid attention to at present.

3. Data collection method

Data collection methods have 130 problems with total scores of 374 , scoring 242.5 belongs to adequate. Of which , the score for census and health service statistics is respectively 24 and 49.5 , belonging to “present but not functional” ; Vital registration and population-based surveys have respectively scores of 35 and 44 , belonging to highly adequate ; Scoring for disease surveillance and health account is respectively 90 and 18 , belonging to adequate. Details refer to table 3-1.

Table 3-1 Assessment result of data collection methods

Categories	Number of questions	Total possible scores	Assessment score and result	
			Score	Result
Total:	130	374	242.5	Adequate
Census	14	32	24	Present but not functional
Vital registration	15	41	35	Highly adequate
Population-based surveys	19	52	44	Highly adequate
Disease surveillance	45	138	90	Adequate
Acute	17	51	31.5	Adequate
Chronic-HIV	14	42	27.5	Adequate
Chronic-TB	14	42	31	Adequate
Health service statistics	29	87	49.5	Present but not functional
Health management information statistics	16	48	31	Adequate
Health system statistics	13	39	18.5	Present but not functional
Health account	8	24	18	Adequate

3.1. Census

Advantages:

- Following core procedures in data collection and management (cartography, data processing, confidentiality) ;Data can be disaggregated by the age and sex..
- Census data can be rapidly obtained , furthermore, the provincial health department has a

highly qualified statistics survey and analysis team to conduct fully analysis and management on the obtained data.

Existing problems:

- Census involved a little health information , and no adult death rate, children death rate, handicapped and other aspects.
- Census has not been used for predicting health service coverage.
- Since census basically serve the governmental institutions, the micro-data of census and survey report are inadequate access to the public.

3.2 Vital registration

Advantages:

- Death sampling points have been set according to the sampling proportion of 17.74% of the whole population of the province , the death cause points of the whole province have established heath cause survey database , every year, conduct data analysis, calculate death rate, expected lifetime and sequence of cause of death, etc. According to the cause of death survey information.
- Every year, points could obtain the life statistic results in different level of the city and countryside.
- From 2000, every point has adopted ICD-10 to conduct disease classification coding , the use life time limit exceeds 10 years , the national unified Death Medical Certification recommended by WHO has been applied , Proportion of all deaths coded to ill defined causes is < 5% , and every year the analysis report of cause of death is issued. The whole province applies the unified survey statistics procedure of cause of death.

Existing problems:

- Due to insufficient input, it's impossible to enlarge the sampling framework of cause survey of death , so that representativeness of the survey data is not adequate.
- Assessment of death cause information is once for every two years.
- The survey In Hubei is only for completing the country mission, it has not utilized survey procedure of cause of death or sample registration system to complete monitoring on the poverty and other survey missions, nor has applied the result of statistics survey in the prediction and assessment for the health service demand and coverage.

3.3 Population-based surveys

Advantages:

- Survey could provide the indicators on population health status, leading risk factors and key information for monitoring MDGs.
- Health service survey is once for every 5 years, the framework and contents are designed, demonstrated by exports organized by the Ministry of Health and determined after pre-survey.
- Hubei has the survey implementation capacity regarding sample design, field work supervision, data processing; The level of comparability of survey results with other surveys according to international standards is high.
- In the survey process, it classified by education, ages and sex, city, county and town , and cooperated closely with the provincial statistics organization.

Existing problems:

- The utilization of the data is not adequate. Health data collection is not incorporated into other surveys;
- Due to no enough propaganda strength , all previous household health service survey results have not won the highly attention by the public.

3.4 Disease surveillance

3.4.1 Acute disease surveillance

Advantages:

- Surveillance system includes 37 kinds of infectious disease and public health event network, for example, schistosomiasis, meningitis, rabies, cholera, typhoid, SARS and bird flu.
- High coverage rate. Hubei has established information transmission network among health administrative organs and medical health organs connecting the town, county, city, province and state; Reporting in short time

Existing problems:

- Disease surveillance system lab support is not adequate , disease monitoring system of the city and county needs to be further improved; the quality and working conditions of personal at grass roots level shall be further improved.
- Surveillance system covering risk group is still quite low, collecting natural history, cause of disease/source of disease related to newly occurred event as well as the disease spreading information shall consume a lot of time.
- Disease surveillance system could not be fairly well integrated into the health service information system , data could not be shared , availability of micro-data is not good.

3.4.2 HIV Surveillance

Advantages:

- The surveillance system is tailored towards the type of epidemic; The capacity working on

HIV surveillance in the country is adequate.

- Every CDC at cities collects data from 10,000 high risk people, The system maintains the same sites over time to allow trend analysis.
- Hubei conducted evaluation on HIV monitoring system every 2 years, and There is regular supervision and training of the staff at the surveillance sites.

Existing problems:

- The lab could perform the quality control, but has not timely released the result.
- Did not have effective mechanism for behavior monitoring, not considered the report problems related to HIV case or AIDS case surveillance.
- The result dissemination of the annual report is not adequate.

3.4.3 TB Surveillance

Advantages:

- Surveillance system is good, contents are quite comprehensive, Hubei established 3-level control network for the whole province, and could provide the information on treatment success, and mortality, whether or not the treatment provided is in line with DOTS strategy, and could timely provide statistics data and report according to the area.
- The surveillance capacity is adequate. TB project has the country surveillance institution to provide technical support, data management and analysis as well as report result.
- Standardized forms are available and used at all levels, in line with national standards

Existing problems:

- No adequate capacity in city and below. The province has not done the assessment of tuberculosis detection rate.
- The provincial TB surveillance has not integrated with health service design system.
- Disease surveillance system is independent to other business system , which could not be effectively linked to the administrative system; Each unit has its own system, lack of a complete set of mechanism to integrate them.

3.5 Health service statistics

3.5.1 Health management information statistics (HMIS)

Advantages:

- Hubei has a well-established health service information system that is based on information generated by health facilities and includes information on a limited number of key health service coverage indicators.
- The annual report on health service statistics can be disaggregated by major administrative region.

- Databank at provincial level is good, and timely updated.
- Health service statistics annual report is published.

Existing problems:

- The personnel is lack of adequate training. Clinical medical personnel could not receive regular information training or continuous education.
- The volume of data collection and number of forms to be filled out at the clinical level has not been reviewed with the purpose of minimizing the workload;
- Data on population health has not been widely used.
- No great attention has been paid to the problem of clinical information bias.

3.5.2 Health system information

Advantages:

- Hubei has a database of health facilities and human resource, which has been updated every year.
- The private sector information is included in the database.

Existing problems:

- It's impossible to obtain yearly output of the health training organizations ,in addition, the data of health facilities does not contain the Global Positioning Satellite (GPS) coordinates of the majority of facilities, Maps and the mapping information is not available for most districts .
- No enough attention has been paid to individual clinics , no standard method for assessing the service quality of individual clinics.

3.6 Health account

Advantages:

- The province has established health account at every level, measure and calculate once for every year, and lag by one year.
- Health account has special personnel to manage, employees are basically adequate, work skillfully and are assigned to health departments.
- Health expense accounting could provide all important financial information in recent years.
- Provide related health expense information of 2 disease prevention and control projects and targeting groups.

Existing problems:

- Hubei has no databank for tracking budget and fund expense, When accounting health expense, it needs to obtain the information from some departments; for certain information, even needs to organize special survey for estimating the data.
- The system for respectively counting and tracking all financial fund budget and fund expense according to the area which needs to be further improved.

- Application of health expense accounting is not adequate , certain data could not be acquired from Internet , and the public could not better apply it.

4. Data synthesis and use

Total score for Hubei provincial health information data synthesis and general assessment result is 54 , which means “adequate”. Among them, the score for the policy advocacy and dissemination is 10, belonging to highly adequate , the score for implementation and action is 14 , belonging to highly adequate ; Resource allocation is 8 , belonging to adequate ; The score for planning and priority setting is 9 , belonging to adequate ; Furthermore, the score for data analysis and use and institutional mechanism is 12 , between “adequate” and” present but not functional” , assessment results refer to table 4-1.

Table 4-1 Assessment result of data synthesis and use

Categories	Number of questions	Total possible scores	Assessment score and result	
			Score	Result
Total	25	75	54	Adequate
Policy advocacy and dissemination	4	12	10	Highly adequate
Implementation and action	6	18	14	Highly adequate
Resource allocation	4	12	8	Adequate
Planning and priority setting	4	12	9	Adequate
Data analysis and use and institutional mechanism	7	21	12	Present but not functional

Advantages:

- Regularly provide report to related institutions which use the information to assess the performance of the government in the health aspect; Policy makers or decision makers have better understanding of the main health issues; Yearly collection and analysis come from the important information of all the sub-systems, and timely publish in the net related health information, enhance information transparency , for the convenience of application by governmental managerial personnel, decision makers, researchers and other personnel at various levels.
- The resource management institution could better apply the health information for the yearly

budget and reasonable resource allocation , whereas, due to the limit of the finance and capacity of managerial personnel at city levels, the support to the health information work is not enough.

- HIS and The Department of Finance and health insurance organizations keep very good relations , could timely provide the needed data. HIS system including data , for example, census data, population dynamic data, household survey, data of special survey and research report and others could be fully comprehensively applied in indicator assessment and cross assessment.

Existing problems:

- The development and application of the existing data is not adequate: Most of the data could only be simply described and analyzed, unable to provide the proposal to the policy makers to conduct effective and thorough analysis and make scientific and reasonable policy; The data analysis capacity of the health information personnel, particularly information statistics personnel at low level is limited; furthermore, large amount of data comes from the low level, and it needs to apply the result for applying health planning and health management ,therefore, this problem needs to be solved urgently.
- The service of data analysis needs to be further strengthened. A lot of former statistics analysis data are used for providing basis to the government and leading level to make decisions , little has been known by the masses , enabling the data information utility rate to be low , transparency and service to be not adequate , these aspects need to be further improved.

Proposal for improving Hubei provincial health information system

Health information system assessment results of Hubei Province indicate that at current stage, the construction of the provincial health information system needs to be further improvement. For solving the existing problems of health informatization construction , the following policy proposals are as follow:

1 . Less attention is paid to health information development in terms of resource input and personnel training; the infrastructure is not adequate, health information is always lagging behind the requirement from government. Managers at various areas should acknowledge the importance of health information, increase the invest into health informationization, organizes special financial resource to strengthen the infrastructure for strengthening health information system of every area. Strive to make the equipment be in due place, and personnel be in due place and work in due place.

2 . Health informatization is kind of public products, therefore, it needs financial support from the government, we propose to increase the fund input in the information construction. In the fund utilization, we should not only pay attention to basic construction , but pay more attention to the enhancement of health information employees quality.

3 . HIS employees information technique and databank technique is not high, and capacity construction in the region is not enough , we propose to strengthen personnel training work of health information system , enhance the business quality and synthesized quality of employees.

4 . Core indicator assessment results shows that data has the problems of registration error of the original information, incomplete basic data and bad representativeness of data. In order to assure the quality of collected data, it's necessary to set up a compete set of data standard, strictly implement the system of daily registration in combining to regular report, assure original data to be accurate, correct and reliable, try the best to reduce wrong report and missed report phenomena and assure the data quality.

5 . Strengthen synthesis of interior health system to be synthesized to other departments. Health system is not independent to other social systems , it has a close relationship with other systems , for example, close relationships with financial departments, social insurance department, civil affairs departments, drug supervision departments, pricing department and statistics departments, etc. Strengthening the contact of health information system with other department and sharing information resources are very important.