



Global Hospital Management Survey – China

Management in Healthcare Report



GHMS-China
Global Hospital Management Survey



WMS
World Management Survey



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EXECUTIVE SUMMARY

The Global Hospital Management Survey – China (GHMS-China) seeks to identify, measure, and compare differences in management practices across hospitals within China and in countries around the world.

Our GHMS-China pilot study, conducted in November 2013, measured the state of management practices in 20 of China's largest public hospitals. This GHMS-China report details the findings of the pilot study with respect to management practices in hospitals and lays the foundation for future areas of inquiry. We hope this report will serve as a valuable guide for a subsequent full study that will survey a greater number and variety of Chinese healthcare institutions in the future.

Major important findings include:

- Quality of management practices in interviewed public hospitals is slightly below average. However, the overall average management score is higher than expected for a developing country like China.
- Public hospitals in China scored the highest in standardization of care and scored the lowest in talent management.
- While performance and target management scores were average, management practices associated with autonomy were low.

Low management scores are most likely due to:

- Low levels of autonomy for hospital managers, hospital department directors, and specialty leaders.
- Absence of formal processes for continuous improvement.
- Lack of formal accountability mechanisms for managing individual performance.
- Subpar employee welfare and benefits, including a lack of incentives.

The findings of this study have significant implications for policy makers and hospitals. These implications are further discussed in the final section of this report.

GHMS - CHINA

Public Hospital Reform in China

China's leaders are currently overseeing large-scale and ambitious reforms of the country's healthcare system. The reforms, which were pronounced by the State Council of the People's Republic of China and the Central Committee of the Chinese Communist Party in March 2009, focus on five key areas: health insurance access, essential medicine provision, primary care delivery, public health service expansion and public hospital reform.

These latest reforms illustrate the critical changes that China's healthcare system has experienced as a result of China's emphasis on its developing economy. Along with economic reform and market liberalization policies since the late 1970s, China's healthcare system has transitioned from a pure government delivery model to a hybridized model where central government funding is limited and local governments rely on providers to operate independently within the private market (Ho, 2011; Blumenthal & Hsiao, 2005).

This has impacted China's public hospital system, which in 2009 contained over 14,500 public hospitals that accounted for over 92% of all outpatients and inpatients across China, as shown in Figure 1 (Wang & Ouyang, 2011). After the reductions in government subsidies, broken down in Figure 2, public hospitals have been pressured to admit more patients, encourage more expensive services and procedures, and overprescribe drugs at marked up prices in order to generate profits (Liu et al., 2000).

| 医院机构 Hospital Organization | 2005 | 2007 | 2008 | 2009 | 2010 |
|-----------------------------------|--------|--------|--------|--------|--------|
| 总计 Total | 18,703 | 19,852 | 19,712 | 20,291 | 20,918 |
| 按经济类型分 By Economic Classification | | | | | |
| 公立医院 Public Hospital | 15,483 | 14,900 | 14,309 | 14,051 | 13,850 |
| 民营医院 Private Hospital | 3,220 | 4,952 | 5,403 | 6,240 | 7,068 |
| 按医院等级分 By Hospital Level | | | | | |
| 三级医院 Level 3 Hospital | 946 | 1,182 | 1,192 | 1,233 | 1,284 |
| 二级医院 Level 2 Hospital | 5,156 | 6,608 | 6,780 | 6,523 | 6,472 |
| 一级医院 Level 1 Hospital | 2,714 | 4,685 | 4,989 | 5,110 | 5,271 |

Figure 1. Overview of China's hospital system.
Source: China Health Statistics Yearbook, 2010.

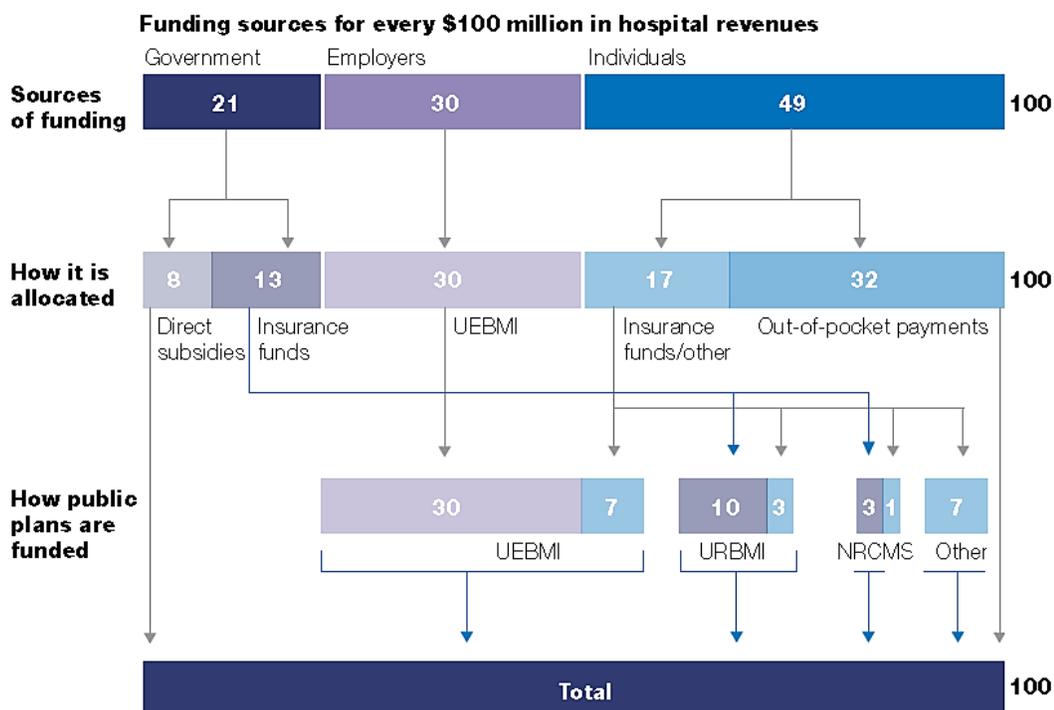


Figure 2. Revenue sources for public hospitals in China.
 Source: Süßmuth-Dyckerhoff & Wang, 2010. UEBMI = Urban Employee Basic Medical Insurance; URBMI = Urban Resident Basic Medical Insurance; NRCMS = New Rural Cooperative Medical System; Other = private insurance

To address these challenges, the Health Reform Office of the State Council selected 16 pilot cities to implement certain aspects of public hospital reform, including policies aimed at separating medical services from pharmaceutical sales, reducing drug markups, correcting the value of medical services, improving payment systems, and reforming operation and personnel management.

Because the results of these pilot reforms have not yet been reported, public hospital reform in China still remains the next major, but uncertain step. Chinese policymakers have offered up a number of bold policy ideas that will require effective management and cooperation between the National Health and Family Planning Commission (NHFP; formerly the Ministry of Health), provincial and city municipal health departments, academia and other healthcare organizations if they are to bear fruit. However, transparent, widespread, and reliable means of evaluating Chinese hospitals do not currently exist.

Project Background

Initiated and currently directed by the China Center for Health Economics Research (CCHER) at Peking University, the Global Hospital Management Survey – China (GHMS-China) Project seeks to remedy this deficiency by implementing the World Management Survey (WMS) in China to collect data on management practices in Chinese hospitals.

The Management Practice Interview Guide, a globally validated survey instrument originally developed by the WMS team, includes questions on 21 different management practices across four major management domains: operation/standardization, monitoring, targeting, and incentives (Bloom et al, 2011, McConnell et al, 2013). The current project seeks to adapt the WMS methodology and the Management Practice Interview Guide to the Chinese context. As shown in Figure 3, the Guide was translated into Chinese.

| | | | | |
|--|---|--|---|---|
| <p>18) Managing Talent</p> <p><i>Tests what emphasis is put on talent management</i></p> <p>Score: 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/></p> | <p>a) How do you ensure that you have enough staff/nurses of the right type in the hospital? b) How do senior managers show that attracting talented individuals and developing their skills is a top priority? c) Do senior staff members get any rewards for bringing in and keeping talented people in the hospital?</p> | <p>Score 1: Senior staff do not communicate that attracting, retaining, and developing talent throughout the organization is a top priority</p> | <p>Score 3: Senior staff believe and communicate that having top talent throughout the organization is key to good performance</p> | <p>Score 5: Senior staff are evaluated and held accountable on the strength of the talent pool they actively build</p> |
| <p>十八、人才管理</p> <p>检验如何强调人才管理</p> <p>分数: 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/></p> | <p>1. 医院如何确保用对人并且员工充足? 2. 高层管理人员是不是重视吸引和培养人才? 怎么体现的? 3. 高层管理人员、医生、护士是否可因为留住或引进优秀人才而获得奖励?</p> | <p>1分: 高层管理人员不将吸引、留住和培养优秀人才作为医院工作的重点</p> | <p>3分: 高层管理人员相信拥有优秀人才是确保良好绩效的关键并将这种理念传达给员工</p> | <p>5分: 对高层管理人员的评估基于构建人才库的力度, 并有明确的问责制度</p> |

Figure 3. Example of a survey question from the WMS and GHMS-China management survey instrument in English and Simplified Chinese.

In November 2013, CCHER completed a pilot study with 20 general public hospitals, located in 12 provinces and 2 municipalities across China. We completed 39 in-depth interviews with clinical staff and discussed 21 different management practices which are divided into four areas – standardizing care, performance management, target management and talent management – further described in Figure 4.

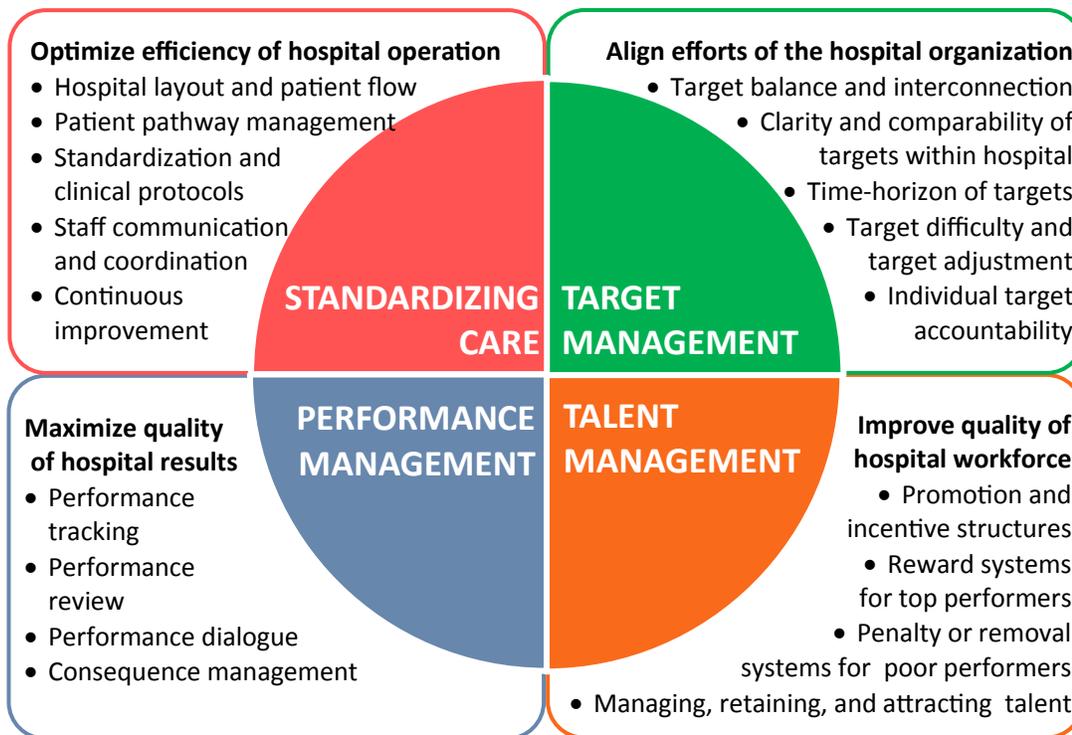


Figure 4. Diagram of the four areas of hospital management measured by GHMS-China.

Project Methodology

In order to examine management practices, GHMS-China research analysts conducted interviews with hospital managers, including specialty directors, physicians, and nurses, for an average of 60 minutes to discuss four key areas of hospital management. Interviewees were mainly based in the Cardiology department, and included directors of departments, physicians, nurses, and other healthcare staff. Flowcharts of the CHMS-China study procedures are provided in Figures 5 and 6.

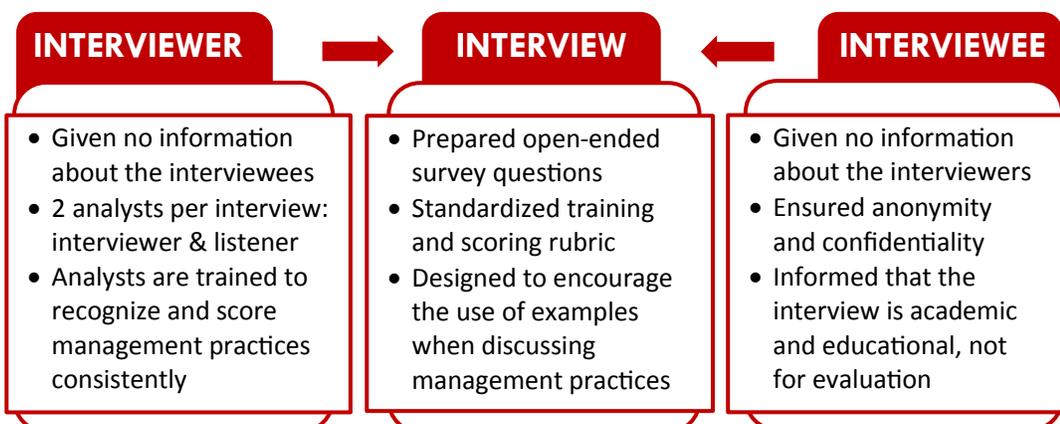


Figure 5. Diagram of WMS and GHMS-China survey methodology.

Our Analysts:

Interviews in the pilot study were conducted by students recruited from a variety of the best universities and academic departments in China, including:

- Peking University
Guanghua School of Management
- Peking University
National School of Development
- Peking University
Health Science Center
- Beijing Foreign Studies
University
- Renmin University
School of Economics
- Central University of
Finance and Economics

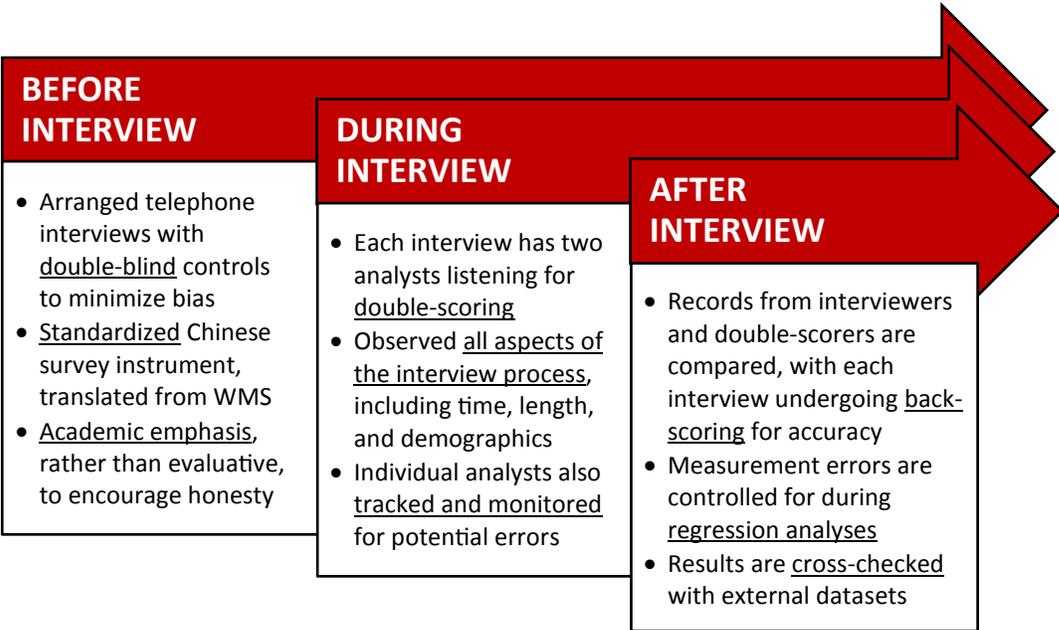


Figure 6. Diagram of WMS and GHMS-China methodology for limiting potential bias.

Like the WMS, GHMS-China evaluated management practices in healthcare using a standardized, double-blind interview process. This process allows for the control of many sources of bias and has led to more accurate estimates of management performance within industries and across the United States, the United Kingdom, and many other countries (Bloom, 2012).

Data were also collected on the organizational structure of each public hospital, examining hospital autonomy and hierarchy structure, defined in Figure 7.

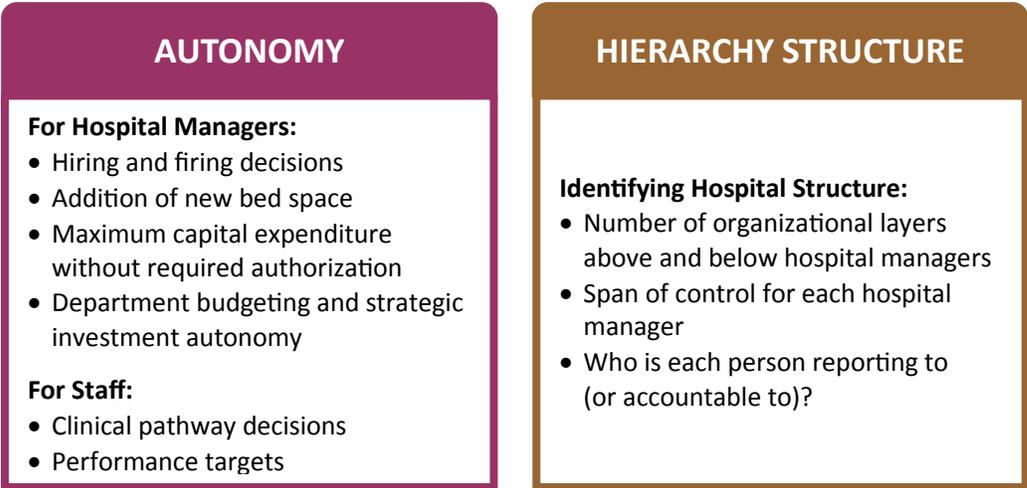


Figure 7. Diagram of the areas of autonomy and hierarchy structure measured by GHMS-China.

For each interview, our research analysts scored responses to questions for each management practice on a standardized scoring scale of 1 to 5, where 1 is the worst practice, 3 is the average practice, and 5 is the best practice.

Hospital Selection

In November 2013, GHMS-China analysts interviewed hospital staff in 20 general public hospitals across 12 provinces (Heilongjiang, Jilin, Liaoning, Shandong, Jiangsu, Fujian, Guangdong, Hubei, Shanxi, Guizhou, Gansu, Qinghai) and 2 municipalities (Beijing, Chongqing) in China, as shown in Figure 8.

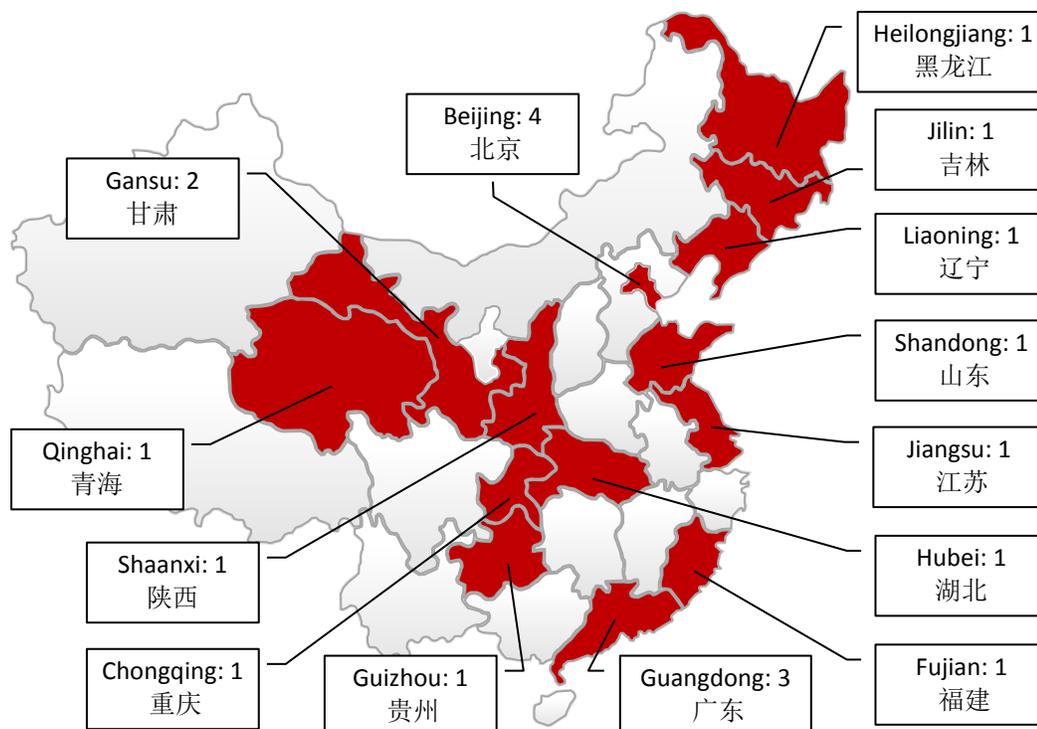


Figure 8. Map of the 20 public hospitals surveyed by GHMS-China.

All of the hospitals in our pilot study are Level 3 hospitals. NHFPC classifies hospitals into three different levels based on the criteria outlined in Figure 9.

| Hospital | Beds | Size | Personnel |
|----------------|---------|----------------------------|--|
| Level 3 | ≥ 500 | ≥ 60 square meters per bed | ≥ 1.04 doctors per bed ≥ 0.4 nurses per bed |
| Level 2 | 100-499 | ≥ 45 square meters per bed | ≥ 0.88 doctors per bed ≥ 0.4 nurses per bed |
| Level 1 | 20-99 | ≥ 45 square meters per bed | ≥ 0.7 doctors per bed ≥ 3 doctors, 5 nurses total |

Figure 9. Table of requirements for public hospital classification in China.

Source: NHFPC; China Health Statistical Yearbook, 2008.

Each level is further sub-divided into several grades, based on hospital size, equipment, and operation.

Interview Selection

The GHMS-China study focused on interviews with managers, doctors, and nurses in specialty departments in Level 3 public hospitals. Although most interviews were targeted towards Cardiology departments, interviews from other specialties and departments – ranging from neurosurgery to orthopedics to endocrinology – were also included in this study.

The job description of personnel working in level 3 hospitals of China has separate academic (teaching, research) and clinical requirements. And therefore, their organization charts are quite elaborate, as shown in Figure 10.

| Hierarchy and Titled Positions in the Chinese Hospital System | | | |
|---|-------------------|---------------------------|-----------------------------|
| Chinese | Pinyin | English | Academic Title |
| 科主任 | kē zhǔ rèn | Director | (administrative title only) |
| 副科主任 | fù kē zhǔ rèn | Vice-Director | (administrative title only) |
| 主任医师 | zhǔ rèn yī shī | Chief Physician | Professor |
| 副主任医师 | fù zhǔ rèn yī shī | Associate Chief Physician | Associate Professor |
| 主治医师 | zhǔ zhì yī shī | Attending Physician | Lecturer |
| 住院医师 | zhù yuàn yī | Resident Physician | Teaching Assistant |
| 护士长 | hù shì zhǎng | Chief Nurse | (administrative title only) |
| 护士 | hù shì | Nurse | Technician |
| 护师 | hù shī | Primary Nurse | Primary Technician |

Figure 10. Table of hierarchy and titled positions in the Chinese hospital system.
Source: NHFPC, 2013.

Out of 39 interviews, 20 were conducted with physicians and 19 conducted with nurses. Because most – if not all – management positions in Chinese public hospitals are filled by a licensed physician, 5 interviews were also conducted at a department director or vice-director level, as represented by Figure 11.

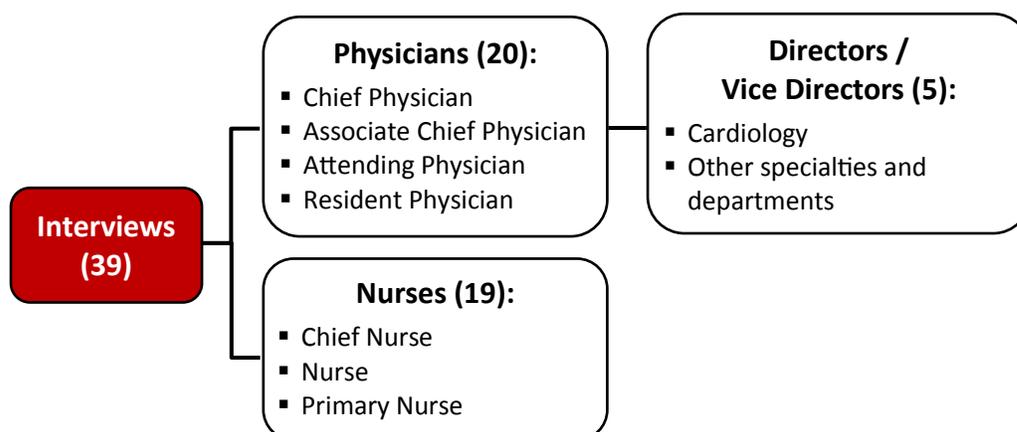


Figure 11. Diagram of GHMS-China survey participants and their hospital positions.

Managers had an average of 5.6 years of working experience in their current positions and 13.9 years of working experience in their hospitals. The longest tenure at any hospital among our interviewees was 30 years and no manager had been in their current post for more than 13 years.

SUMMARY RESULTS

Overall Hospital Management Score

Based on GHMS-China pilot study results, overall average management score across large public hospitals in China was **2.86** on the 1-5 WMS management scale. The score of 2.86 suggests that the current state of hospital management for Chinese hospitals is slightly below a standard average score of 3.

According to Figure 12, which breaks down the overall hospital management score by areas of management, Chinese hospitals showed particular strength in their standardization/operations management and acute weakness in their talent management.

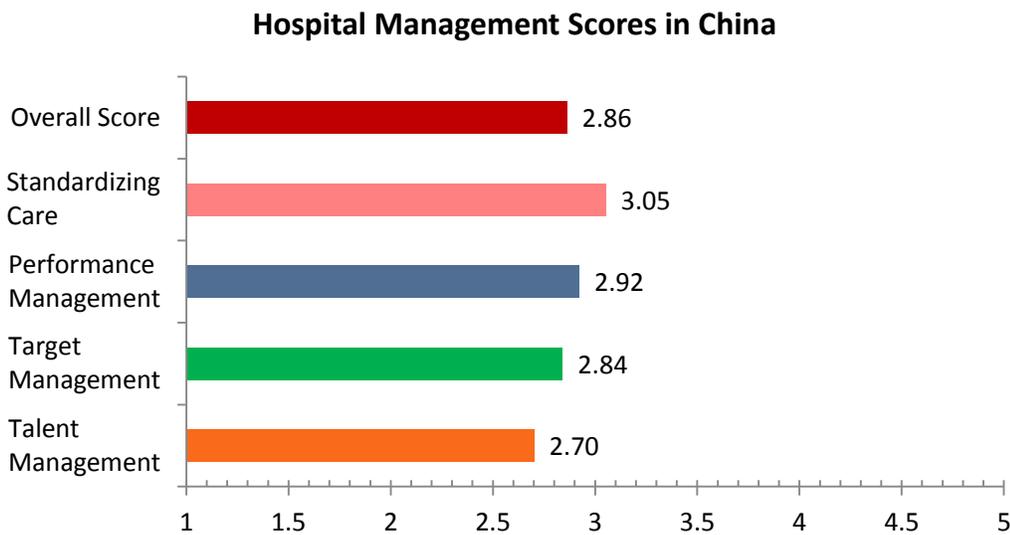


Figure 12. Graph of the overall average hospital management score in China and breakdown into the four areas of hospital management.

It is important to note that all of the 20 hospitals participating in the pilot study were Level 3 general hospitals, the highest classification given by the NHFPC for all public hospitals. Therefore, these results may overestimate the state of management for hospitals classified with lower levels in China.

Despite the limited sample size, the quality and novelty of data collected from the 39 interviews is considerable enough to provide a brief, but precise assessment on the current state of management in China's public hospitals, and can provide key insight into a future nationwide scaled-up study.

International Comparisons

When compared to results from identical hospital management studies performed in other countries (Figure 13), China's average hospital management score is quite surprising. Despite appearing to be below average, a score of 2.86 is relatively high internationally, above that of the United Kingdom and second only to that of the United States.

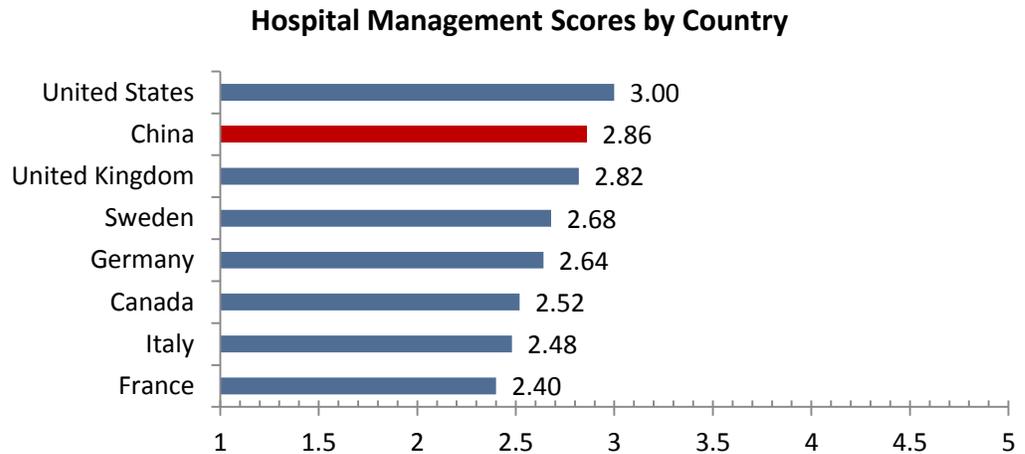


Figure 13. Graph of overall hospital management scores by country.
Source: WMS, Management in Healthcare Report, 2010.

A key caveat of this cross-national comparison lies in both the sample selection, or the type and number of hospitals that participated in the GHMS-China pilot study relative to prior studies. Although there was wide geographic coverage, the pilot study only included Level 3 hospitals, which are the highest classification of public hospitals in China and are typically located in large metropolitan areas.

Additionally, the number of hospitals interviewed in the GHMS-China pilot study is substantially lower than that of WMS studies in other countries (Figure 14).

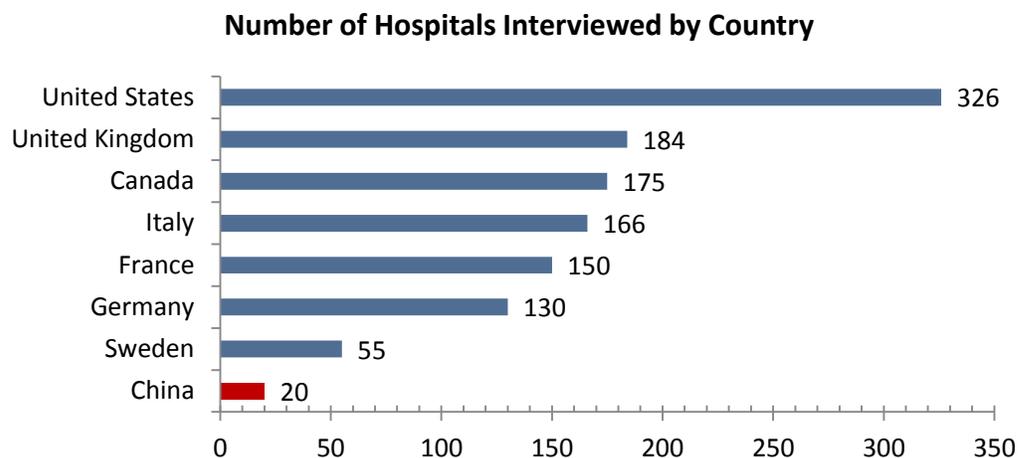


Figure 14. Graph of number of hospitals interviewed by country.
Source: WMS, Management in Healthcare Report, 2010.

This means that the scores from our pilot study are more likely to vary more significantly and be an under-representative sample of the true management scores for all hospitals in China.

Fortunately, the distribution of scores collected in our pilot study appear to be near-normal, as shown in Figure 15.

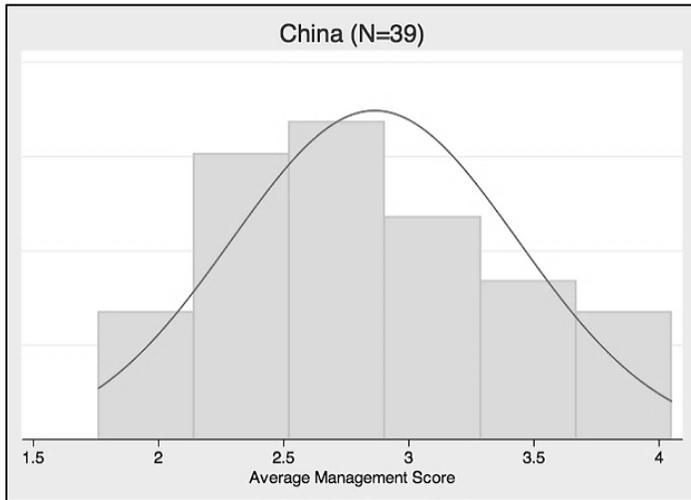


Figure 15. Distribution of average management scores in China by interview (N=39).

This similarity with the distributions of scores in other countries is an indicator that our model in China is consistent with that of other WMS studies. The distribution of management scores for China is shown alongside those of other countries in Figure 16:

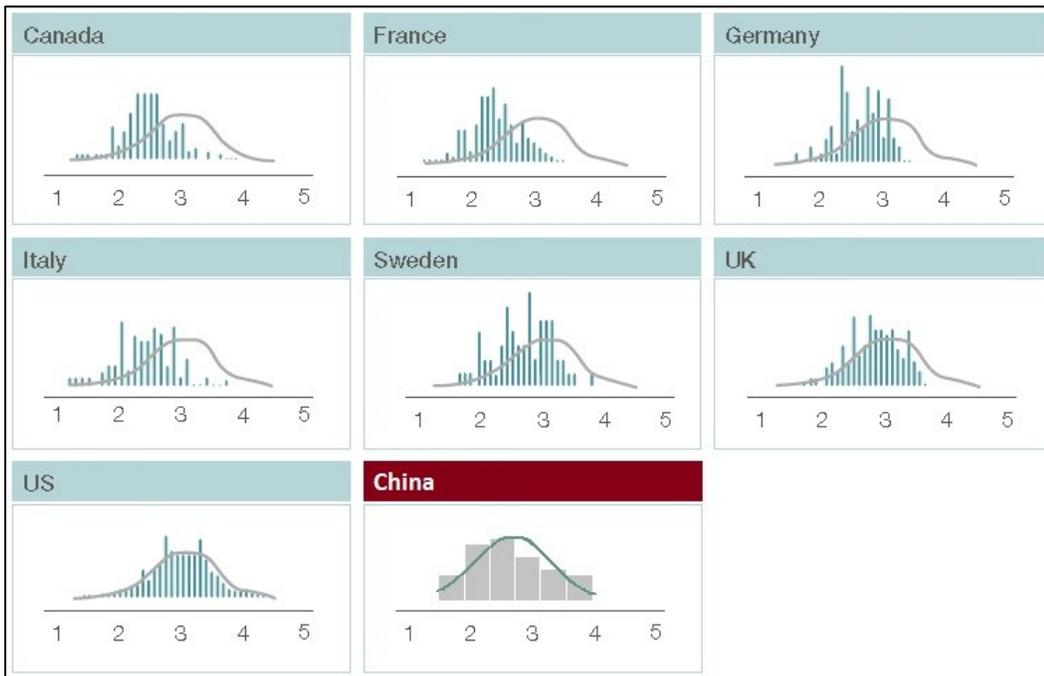


Figure 16. Distribution of average management scores by country. Source: WMS, Management in Healthcare Report, 2010.

Factors for Variation

Variation based on Manager Self-Assessment

At the end of every interview, we asked hospital managers to rate their own hospitals on a scale from 1 to 10, not factoring in their own performance. Figure 17 shows the distribution of the means of these responses, after having been converted to a 5-point scale.

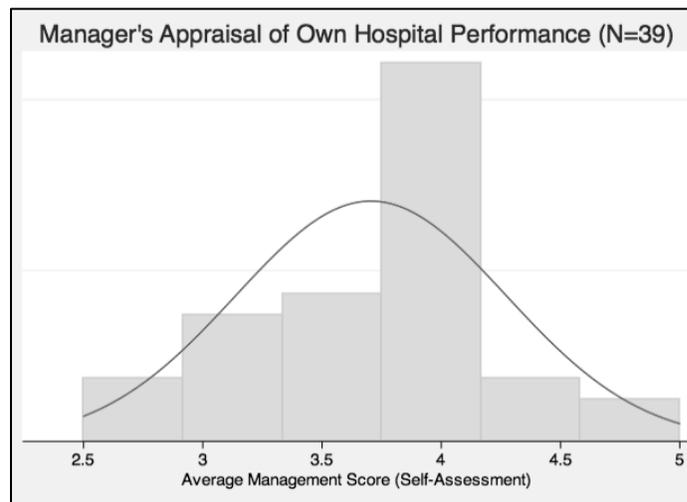


Figure 17. Distribution of self-assessed hospital management scores in China.

Self-assessed scores averaged out to 3.75, which is nearly one full-point above the objective scoring measurements presented in the last section. This indicates that a majority of the interviewees perceived their hospitals to be above average, and demonstrated “overconfidence” in that their perceived score is higher than the score attained from their affiliated hospital’s management practices.

Variation based on Hospital Size

There appears to be an association between hospital-size, as measured by bed count, and average hospital management score in China. As shown in Figure 18, management practices appear to be better in larger hospitals than smaller ones.

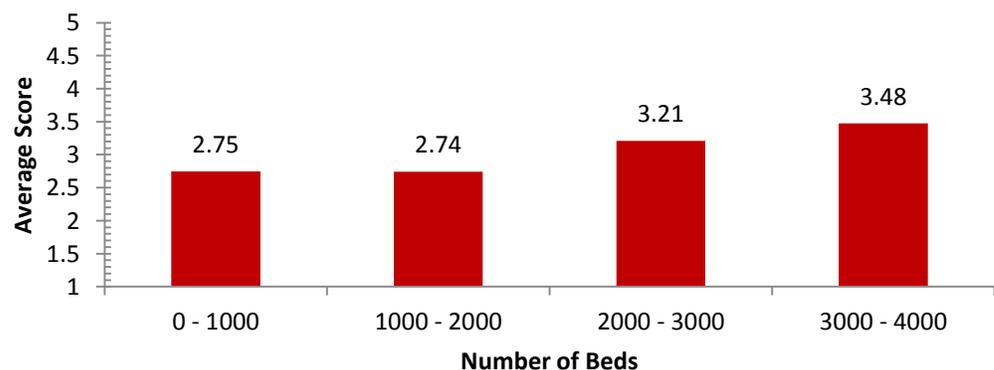


Figure 18. Graph of average hospital management score by hospital bed count in China.

However, this variation is not significant among interviewed hospitals. One reason for this is because all the public hospitals selected in our pilot study were Level 3 hospitals, which are required to have at least 500 beds according to NHFPC requirements, resulting in no significant variation in size among the hospitals interviewed.

In the full study, we will further explore a twofold implication to the size-performance relationship: could better managed hospitals in China be more capable of growing or could large-scale hospitals be more attractive for talents subsidies, revenues, and other resources?

Variation based on Provincial GDP

Our pilot study was carried out in 12 provinces and 2 city municipalities, which included China’s most prosperous regions, the capital city (Beijing), and Eastern coast (Jiangsu, Fujian and Guangdong), as well as some of the country’s least developed areas in the West (Qinghai, Gansu, Guizhou).

Since hospital budgets rely partially on subsidies given out at the provincial level, we expected to see an association between provincial GDP and our hospitals’ average management score. This was, indeed, the case, as shown in Figure 19:

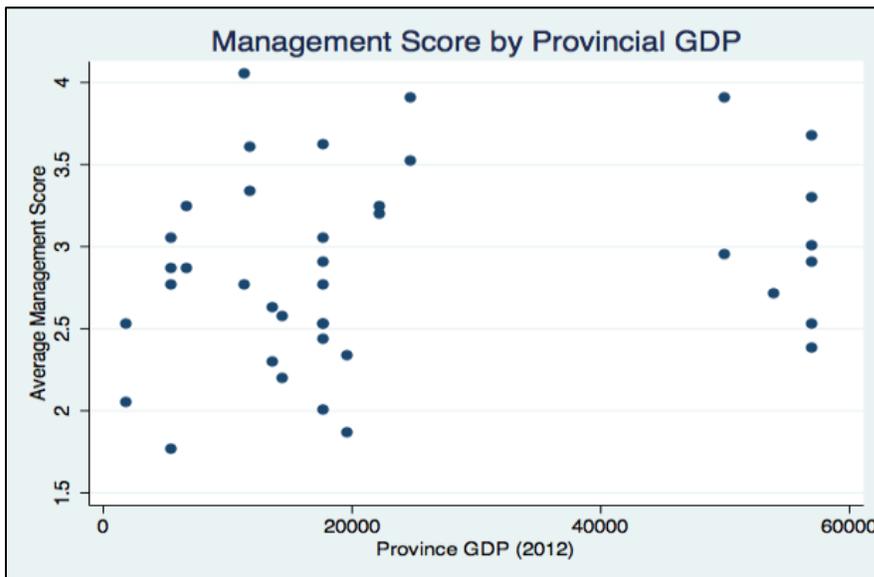


Figure 19. Plot of average management score by provincial GDP
Source: China’s Bureau of Statistics Report, 2012.

This result points to the importance in broad geographic coverage for the full GHMS-China study, especially when sampling hospitals from a country as vast in scale, yet as varied in economic development as China.

HOSPITAL MANAGEMENT IN CHINA

Standardizing Care

The following five dimensions of management practices were used to measure the standardization of care and operation in Chinese hospitals: hospital layout, patient pathway, clinical protocols, use of human resources, and continuous improvement. Examples of general management practices for each Standardizing Care dimension observed in Chinese public hospitals are summarized below.

| Dimension of Standardizing Care | Management Practices |
|--|--|
| <p style="text-align: center;">Layout of Patient Flow</p> | <p>Layout of hospitals:</p> <ul style="list-style-type: none"> ▪ Chinese hospitals have numerous layout requirements built into each grading evaluation. While standardized across hospitals in the same level, hospital layouts are typically not challenged beyond NHFPC regulations. ▪ Many Chinese hospitals have service centers or escort services available to guide patients during busy hours. <p>Typical patient flow: Registration → Outpatient clinics/Specialty clinics → Examination → Payment → Pharmacy</p> |
| <p style="text-align: center;">Clinical Pathway</p> | <ul style="list-style-type: none"> ▪ Many Chinese hospitals have not implemented clinical pathways across the hospital and pathways may only be available for one or two patient groups. ▪ Most clinical pathways are imposed top-down from the NHFPC. Hospitals have little incentive, opportunity, or capability to implement changes. |
| <p style="text-align: center;">Standard Protocols</p> | <ul style="list-style-type: none"> ▪ Standardized protocols for each hospital are typically available to staff on websites, bulletin boards, or in printed manuals. ▪ Monitoring is limited to inspection of patient records and ward rounds; many managers claimed that they could not know if all staff followed the protocols regularly. ▪ Responsibilities for monitoring and inspection are limited to the Directors of Specialties and Chief Nurses. |
| <p style="text-align: center;">Use of Human Resources</p> | <ul style="list-style-type: none"> ▪ Physicians are not moved across specialties or departments due to boundaries between professions ▪ Hospitals mostly rely on allocating work between nurses based on specialty, capability, and personal characteristics. ▪ High-scoring hospitals utilized emergency nurse teams that could be transferred from less busy to busy areas. |

| | |
|-------------------------------|--|
| Continuous Improvement | <ul style="list-style-type: none"> ▪ In high-scoring hospitals, Directors hold monthly quality improvement meetings to discuss problems and solutions. ▪ For most hospitals, Chief Nurses are required to monitor and inspect nurses at least 3 times a day, by checking patient records and conducting ward rounds. ▪ In high-scoring hospitals, patients would fill out a satisfaction survey or be interviewed via telephone after discharge |
|-------------------------------|--|

Although Chinese hospitals scored the highest in standardizing care out of the four areas of hospital management, scores for clinical pathway management were the lowest across all 21 management practices, as shown in Figure 20.

Standardizing Care: Average Score by Dimension

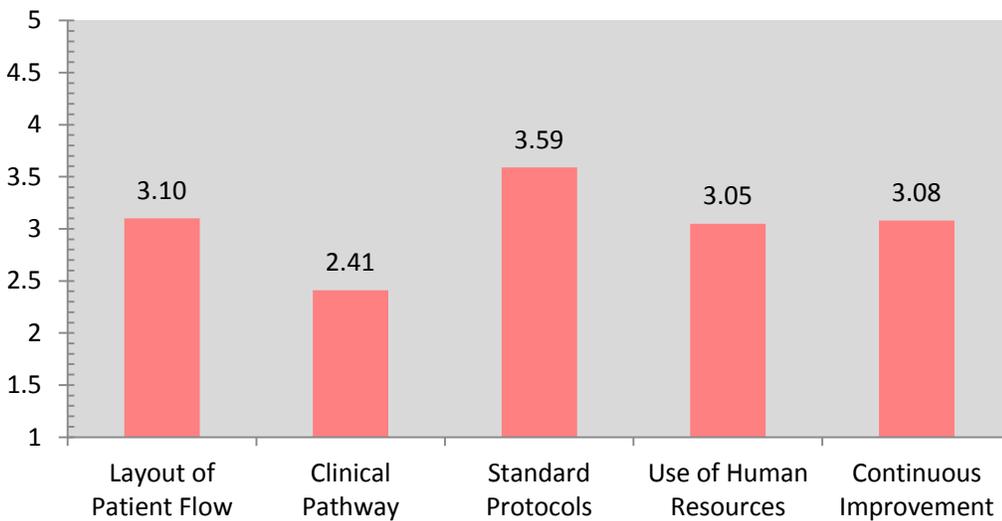


Figure 20. Graph of Standardizing Care management scores by management dimension.

One possible reason for the low scores in clinical pathway management is that China’s NHFPC started implementing a pilot clinical pathway platform as recently as 2009. This platform includes many changes that have been imposed upon hospitals and pose a challenge to departments and individual clinicians alike. Hospital managers oftentimes indicated to us that expected changes to clinical pathways were either difficult to follow or implement in practice.

However, Chinese hospitals scored the highest (3.59) in creating and following standardized protocols. Additionally, management practices in patient flow optimization, use of human resources, and continuous improvement all had an average score of 3.

Figure 21 on the next page shows detailed breakdowns of the aggregate scores in Standardizing Care, which indicate that public hospitals have the capabilities and resources available for improving management in these dimensions.

Key Insights:

- Senior staff should actively monitor layout of patient flow and implement protocols with appropriate regularity.
- Allocation of work and improvement processes need to have more clinician involvement to create more incentives for better performance.
- The NHFPC should provide hospitals with training programs on workplace optimization and clinical pathway implementation.
- Hospitals need more autonomy from the NHFPC on clinical pathway management.

Scoring Breakdown for Each Management Dimension

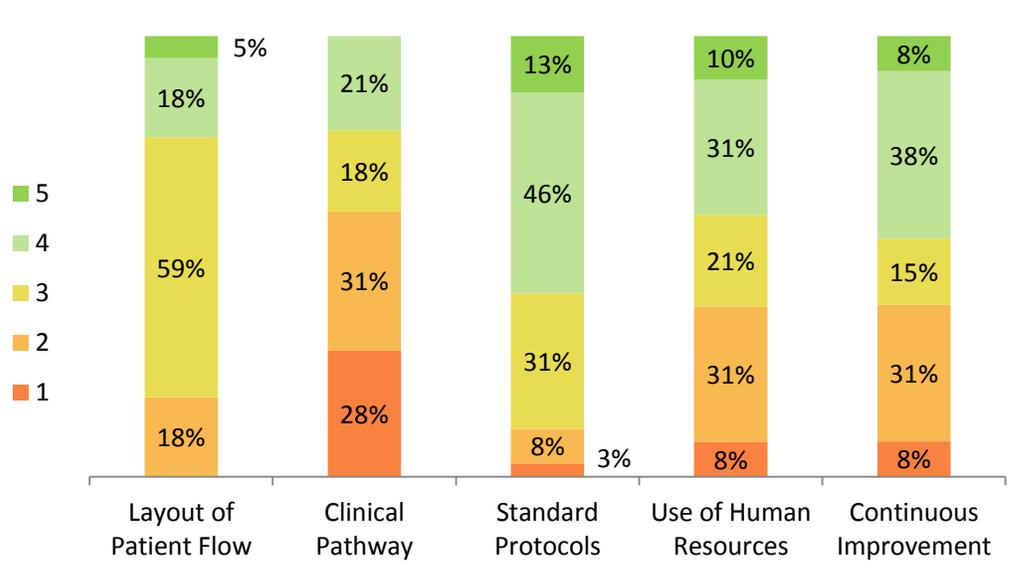


Figure 21. Scoring breakdown for each management dimension of Standardizing Care.

- **Layout of Patient Flow:** More than half (59%) of Chinese hospitals had an average score of 3 for this management practice, indicating that there are processes in place for optimizing hospital layouts, but that these processes are not regularly updated or improved.
- **Clinical Pathway:** More than half (59%) of Chinese hospitals scored below average, due to responses that indicated that control of clinical pathway remains centralized within the NHFPC.
- **Standard Protocols:** 89% of Chinese hospitals scored an average of 3 or above, suggesting that there is a strong emphasis on the standardization and monitoring of clinical procedures among Chinese hospitals.
- **Use of Human Resources:** There is a large gap in scoring observed here with 41% of hospitals scoring above average and 39% of hospitals scoring below average. Chinese hospitals either have systems for effective human resource deployment or do not employ such processes.
- **Continuous Improvement:** There is also a large gap in scoring here with 46% of hospitals scoring above average and 39% of hospitals scoring below average. Differences in scoring are indications of whether or not a hospital had regular processes in place for staff to identify, report and help resolve problems as they occur.

Performance Management

The following four dimensions of management practices were used in order to measure performance management in Chinese hospitals: performance tracking, review, dialogue, and consequence management. Examples of practices for each Performance Management dimension observed in Chinese public hospitals are summarized below.

| Dimension of Performance Management | Management Practices |
|--|---|
| Performance Tracking | <ul style="list-style-type: none"> ▪ Most performance indicators are tracked every month, including outpatient quantity, surgical quantity, average length of stay, bed turnover rate, academic publications, etc. ▪ While hospital managers have access to performance data, many hospitals have separate Information/Medical Service Departments to oversee data collection and tracking ▪ Performance results are very openly communicated to all staff in a hospital, either through informal meetings, bulletin boards postings, and/or website postings. |
| Performance Review | <ul style="list-style-type: none"> ▪ Performance indicators are rarely reviewed and/or changed beyond NHFPC requirements. ▪ Only senior hospital staff can review indicators; however, they do so occasionally, with results informally communicated to staff and not inclusive of all staff groups. |
| Performance Dialogue | <ul style="list-style-type: none"> ▪ In many hospitals, no formal review conversations are held either between senior staff or within departments. ▪ Conversations that do occur are informal, and are often in response to problems related to performance evaluations that arise during hospital operations. ▪ Hospital managers complained about lack of autonomy within their specialties or departments, due to pressure from external administrative departments |
| Consequence Management | <ul style="list-style-type: none"> ▪ Although processes for exposing problems were rare, hospital managers claimed to be able to resolve minor problems within one to two days of exposure. ▪ Failure to respond or achieve agreed tasks would typically result in reduced bonuses within one or two months. ▪ High-scoring hospitals employ a separate Medical Service department to oversee implementation of tasks every month. ▪ Failures in cost-control are rarely identified or addressed. |

Among the four performance dimensions measured in our study, Chinese hospitals had the highest average score in performance tracking (Figure 22). This relatively higher score (3.46) may be due to hospitals being required to track and report specific performance indicators to the NHFPC.

Managers felt, on the whole, that this indicator is critical for hospital evaluation; nearly every Level 3 hospital we interviewed had senior staff directly assigned for performance tracking. The results of both departmental and individual performance were readily made available for both staff members and us to see.

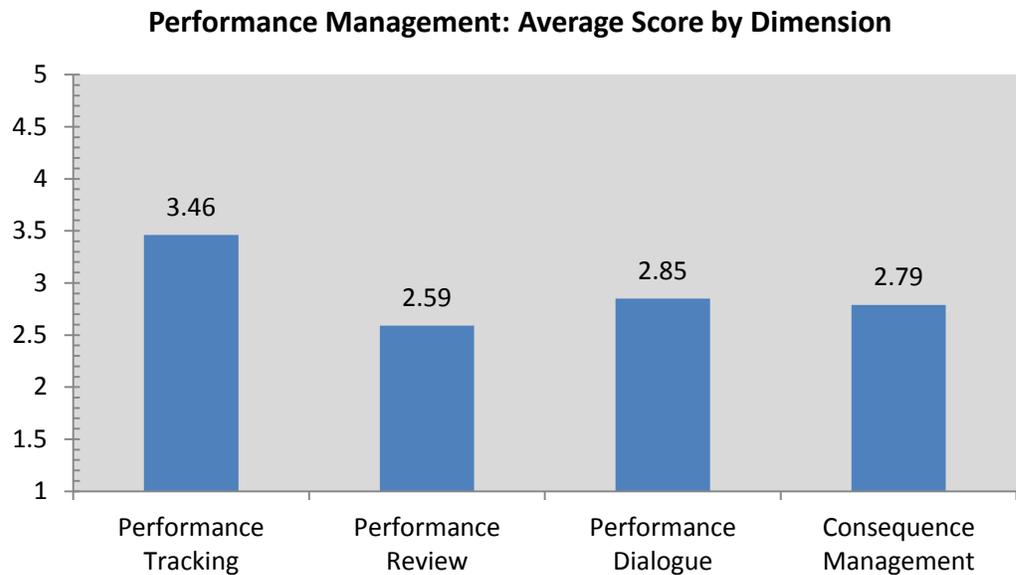


Figure 22. Graph of Performance Management scores by management dimension.

Despite this above average score in performance tracking, Figure 22 gives little indication that Chinese hospitals reviewed or tracked performance indicators beyond those required by NHFPC. Accordingly, Chinese hospital scores for performance reviews were the lowest (2.59) among the four dimensions.

Scores for performance dialogue (2.85) and consequence management (2.79) were also below average, as Chinese hospitals managers mostly relied on informal and irregular processes to manage both performance conversations and performance plans, with little to no formal processes available for accountability.

Figure 23 on the next page shows detailed breakdowns of the aggregate scores in Performance Management, which indicate that Chinese public hospitals excel at certain dimensions, such as performance tracking, but require improvement in others, such as performance review and performance dialogue.

Scoring Breakdown for Each Management Dimension:

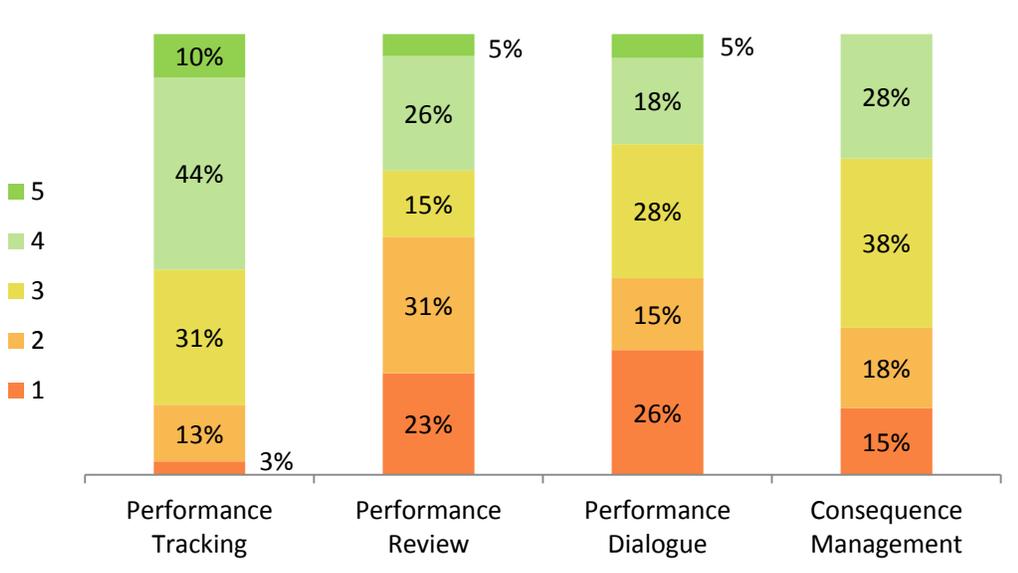


Figure 23. Scoring breakdown for each management dimension of Performance Management.

- **Performance Tracking:** Over 85% of Chinese hospitals scored an average or above in performance tracking, indicating that hospital managers place unique emphasis on the measurement and tracking of performance and quality indicators in China.
- **Performance Review:** Over half (54%) of Chinese hospitals scored below average, due to hospitals lacking regular review meetings or conversations about performance indicators.
- **Performance Dialogue:** Approximately 26% of Chinese hospitals had the lowest management score of 1 while another 28% had an average score of 3. This gap in scores is caused by hospitals either having adequate review meetings or not having review meetings at all.
- **Consequence Management:** Although no hospital had the best score of 5, approximately 66% of Chinese hospitals scored at least average in consequence management. Higher scores were due to many hospitals managers being capable of using penalty or retraining processes to manage problems or procedural failures.

Key Insights:

- Although hospitals continuously track performance or quality indicators required by the NHFPC and beyond, senior staffs need to be more active in performance management.
- Formal processes, such as regular meetings to review performance indicators, are needed to identify hidden problem, address root causes, and define clear follow-up steps.

Target Management

The following six dimensions of management practices were analyzed in order to measure target management in Chinese hospitals: target balance, target interconnection, time horizons, target stretch, individual accountability, and target clarity and comparability. Details of management practices observed for each Target Management dimension are summarized below.

| Dimension of Target Management | Management Practices |
|---------------------------------------|---|
| Target Balance | <ul style="list-style-type: none"> ▪ Goals only focus on medical quality and research, including improvement in clinical technology, accomplishment of clinical tasks, research and innovation. ▪ Goals are usually set to meet NHFPC requirements ▪ Goals only extend to senior staff; many clinicians claim that they do not clearly know hospital's goals only individual tasks. |
| Target Interconnection | <ul style="list-style-type: none"> ▪ Hospital goals are discussed by hospital leaders and cascaded down to department Directors by weekly meetings, which are then informally cascaded down to specific staff. ▪ Department Directors will typically assign individual targets to clinicians without clear communication of hospital goals. |
| Time Horizons | <ul style="list-style-type: none"> ▪ Long-term and short-term goals are set independently, with most long-term goals set without specific plans or benchmarks. ▪ Short-term goals (≤ 1 year) are limited to NHFPC reporting requirements, accomplishments in clinical tasks, improvements in quality, and research goals. ▪ Long-term goals (3-5 years) are limited to hospital expansions, improving reputation, or meeting evaluation goals. |
| Target Stretch | <ul style="list-style-type: none"> ▪ Clinicians expressed frustration with targets, claiming that most hospital targets are difficult to reach. ▪ There are no opportunities for clinicians to be actively involved in setting targets; therefore, little clinical input is available. |
| Clinician Accountability | <ul style="list-style-type: none"> ▪ Clinical performance is considered the main part of the job, with accountability focused on clinical quality. ▪ Most hospitals did not have cost-saving requirements or accountability procedures for clinicians. ▪ For poor performance, bonus reduction is generally a widely accepted practice across all hospitals in China. |
| Clarity & Comparability | <ul style="list-style-type: none"> ▪ For high scoring hospitals, all hospital staff are able to check their individual performance via website or hospital offices. ▪ Interviewees complained that many target measures were complex and not easily understood. |

On average, Chinese hospitals scored average or below average in all dimensions of target management (Figure 24).

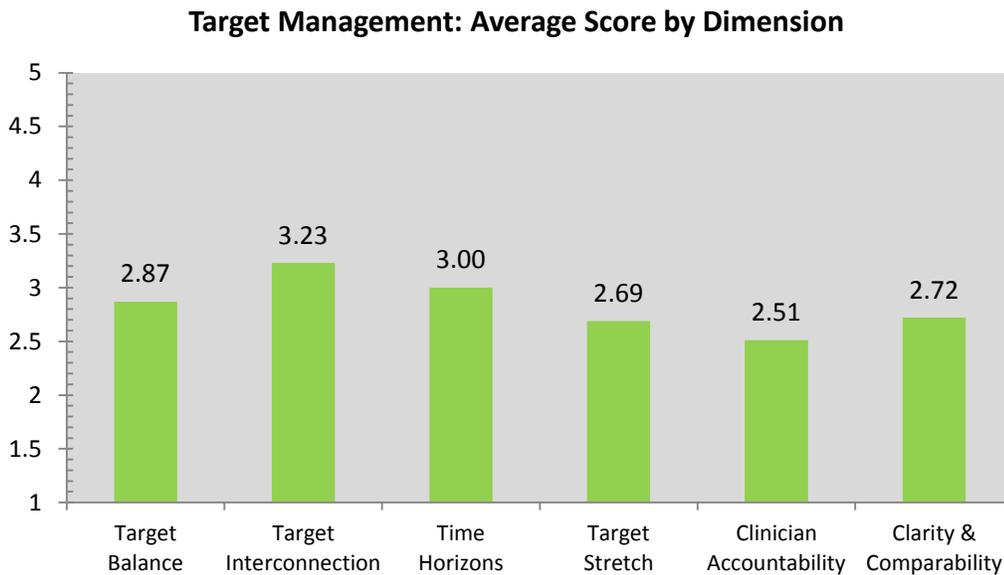


Figure 24. Graph of Target Management scores by management dimension.

The one exception is target interconnection, where Chinese hospital managers scored above average in linking targets to hospital performance and cascading targets to certain staff groups.

Chinese hospitals scored average in time horizons, with staff indicating that there are short and long-term targets, but they are set independently of each other and not communicated regularly to all hospital staff.

Chinese hospitals perform worst in the target stretch (2.69) and clinician accountability (2.51) dimensions of target management, mostly because there is a lack of leadership roles and accountability, respectively, among clinicians for the delivery of individual goals. Based on interview responses, clinicians passively accomplish goals and often have no input on revising targets that are already perceived to be too difficult to meet.

Target balance, and clarity and comparability of target are slightly below average, showing that goals do cover some aspects of management but are not balanced, and individual targets are not well defined.

Figure 25 on the next page shows detailed breakdowns of the aggregate scores in Target Management.

Key Insights:

- Goals should cover a balanced set of targets, including quality, waiting time, operational efficiency, and financial balance.
- Clinicians should be more actively involved in the target setting process, in order to prevent difficulty in target stretch and improve target clarity.
- More formal processes are needed to improve target communication and comparability between hospital departments.

Scoring Breakdown for Each Management Dimension:

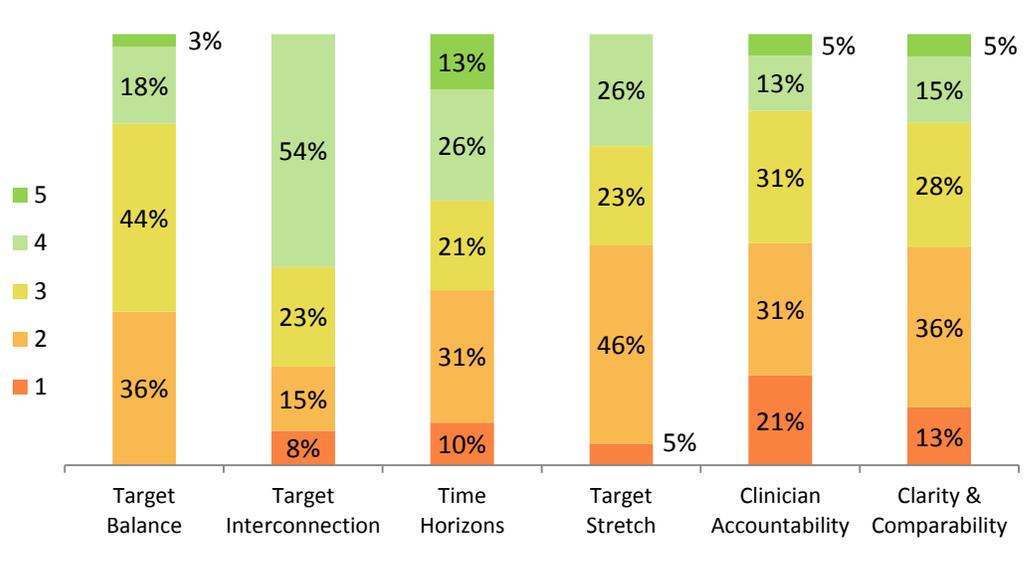


Figure 25. Scoring breakdown for each management dimension of Target Management.

- **Target Balance:** Although none of the Chinese hospitals interviewed scored a 1 for the target balance dimension, this may be due to our sample only including Level 3 hospitals, which have stringent reporting requirements from the NHFPC. Roughly 44% of Chinese hospitals had balanced sets of targets, scoring a 3, and 36% of Chinese hospitals did not have financial balance or cost control targets, scoring a 2.
- **Target Interconnection:** Over half (54%) of Chinese hospitals scored above average. Targets are managed well down hospital organizations, with hospital leaders cascading goals down to specific staff groups.
- **Time Horizons:** Chinese hospitals scored variably in this dimension, with scores distributed among scores of 2, 3, and 4, showing variation between hospitals in terms of setting long-term and short-term targets.
- **Target Stretch:** Over half (51%) of Chinese hospitals scored below average in the target stretch dimension. Although targets may cascade down, clinicians complained about the difficulty of their targets and the inability of clinical staff to provide input when setting targets.
- **Clinician Accountability:** Over half (52%) of hospitals scored below average, due to a lack of accountability beyond clinical quality. There were no formal leadership roles among clinicians to deliver targets.
- **Clarity & Comparability:** Nearly half (49%) of hospitals scored below average, due to measures being complex and not clearly understood.

Talent Management

Six dimensions of management practices were used in order to measure talent management in Chinese hospitals: rewarding high performers, removing poor performers, promoting high performers, managing talent, retaining talent, and attracting talent. Examples of practices for each Talent Management dimension observed in Chinese public hospitals are summarized below.

| Dimension of Talent Management | Management Practices |
|----------------------------------|---|
| Rewarding High Performers | <ul style="list-style-type: none"> ▪ Clinician incomes are comprised of basic pay and bonuses. ▪ Salaries depend on a clinician's hospital position and academic title, but generally are based on workload rather than quality or individual performance. ▪ Non-financial incentives include training opportunities and academic research opportunities, but are informally awarded. |
| Removing Poor Performers | <ul style="list-style-type: none"> ▪ Due to NHFPC grading requirements and workload pressure, hospitals are incentivized against removing hospital staff. ▪ Poor performers are moved to less critical roles or re-trained. ▪ Clinicians are considered full-time and permanent, with firing procedures difficult if not impossible. |
| Promoting High Performers | <ul style="list-style-type: none"> ▪ Tenure is a basic requirement for promotion candidates, with hospital committees then considering clinical performance, workloads, educational background, and research experience. ▪ High-scoring hospitals had self-selecting promotion processes, where any clinician can apply for a promotion at a given time, provided they believed their performance to be adequate. |
| Managing Talent | <ul style="list-style-type: none"> ▪ Hospital managers are not held accountable for or evaluated on attracting, retaining, or developing staff. ▪ Opportunities for studying abroad and other seminar training processes are available but processed informally. |
| Retaining Talent | <ul style="list-style-type: none"> ▪ Hospital managers have few measures to persuade talent to stay, with most relying on informal negotiations. ▪ Major reasons for leaving include: heavy workloads, low salary, high pressure, lack of concern for clinicians, and insufficient welfare or benefits. |
| Attracting Talent | <ul style="list-style-type: none"> ▪ Because of the importance of NHFPC grades, most hospitals compete only in terms of grade evaluations. ▪ Hospitals only need to rely on their grading, reputation, and academic influence to attract top clinicians. Higher level and grade hospitals have intrinsically higher value to clinicians. |

Scores for talent management, in general, were the lowest among the four key areas of hospital management studied. Figure 26 showed that scores for each dimension in talent management are also, not surprisingly, below average.

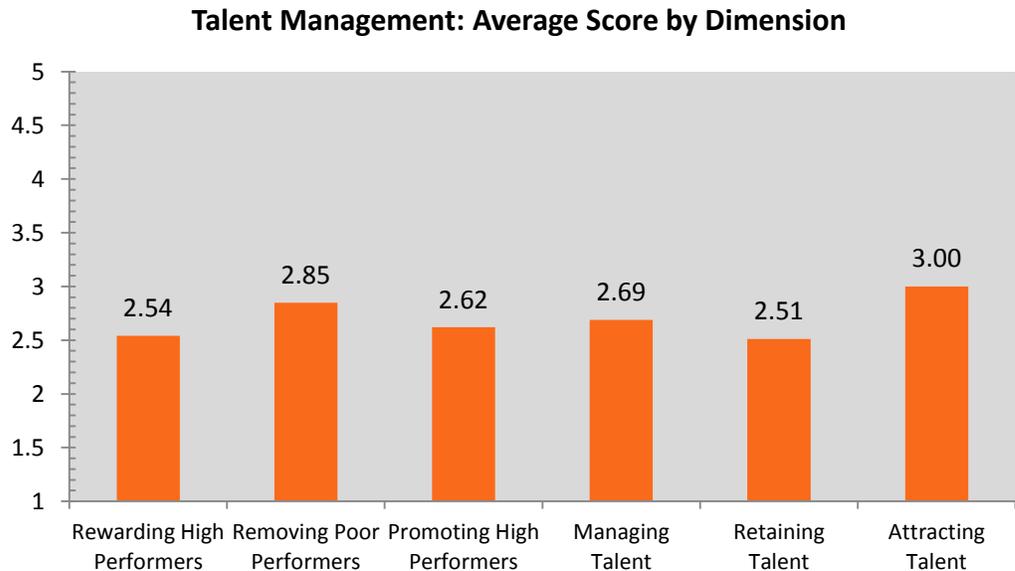


Figure 26. Graph of Talent Management scores by management dimension.

Attracting talent was the only dimension to reach an average score, indicating that working in Chinese hospitals does not offer a unique advantage or value proposition for graduates from medical and nursing schools. Most Level 3 hospitals interviewed were able to recruit talent by relying on their reputation and academic influence, rather than attract them by providing competitive benefits or salaries.

The lowest scoring management dimension was retaining talent. Most Chinese hospital managers do not have mechanisms in place to keep talented clinicians, and often have no ability to replace or recall clinicians that left.

Although many hospitals have strong financial incentive systems in place to manage performance, their utility in managing talent is not well understood in Chinese hospitals. Managers should be provided with more training and stronger incentives in human resource management.

Figure 27 on the next page shows detailed breakdowns of the aggregate scores in Talent Management, which indicate that public hospitals in China lack strong management practices in talent management across the board, which was surprising given that the public hospitals interviewed in the GHMS-China study were all considered top Level 3 public hospitals by the NHFPC.

Scoring Breakdown for Each Management Dimension:

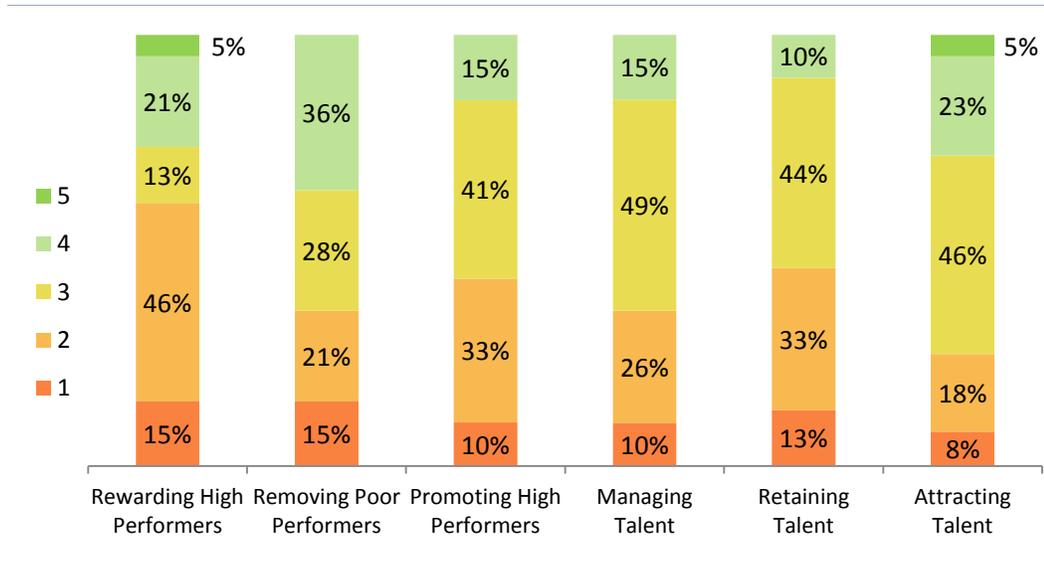


Figure 27. Scoring breakdown for each management dimension of Talent Management.

- Rewarding High Performers:** Over half (61%) of Chinese hospitals scored below average on this dimension. Although there are reward systems, clinician bonuses are largely based on position and workload rather than quality of individual performance.
- Removing Poor Performers:** Chinese hospitals had varied scores in this dimension, with most hospitals only able to move underperformers to less critical roles, rather than directly fire them.
- Promoting High Performers:** 41% of Chinese hospitals scored average and 41% scored below average in this dimension. Most hospitals rely on tenure, crudely as years of service, as the basis of promotions, but there are some that included additional mechanisms in consideration of performance.
- Managing Talent:** Almost half (49%) of Chinese hospitals interviewed scored average in this dimension. Most hospital managers recognized the importance of managing talent, but no processes are in place to incentivize or motivate managers to improve talent management.
- Retaining Talent:** Chinese hospitals that do not have formal processes in place to keep top practitioners and managers rely on informal conversations. Score differences reflect these hospital efforts used to keep talent.
- Attracting Talent:** 46% of Chinese hospitals scored average in this dimension. Most clinicians claimed that their value proposition is comparable to those offered by other hospitals, but there is much consideration for brain drain to related companies, such as management consulting companies, laboratories, pharmaceutical and biotechnology companies.

Key Insights:

- Out of all hospital management areas, talent management requires the most improvement and emphasis.
- Reward and promotion systems should rely less on tenure and more on individual clinician performance.
- Hospital managers should be incentivized or held more accountable for their talent management.
- Hospital levels and grades currently play too significant of a role in the ability of hospitals to attract talent.

Autonomy and Hierarchy Structures

In addition to the above management questions, the GHMS-China pilot study also collected information about hospital autonomy and hierarchy structures. To measure this, we asked questions about who in the hospital had the authority to make decisions on the following four dimensions: hiring nurses, adding beds in a department, adding beds in the hospital, and budget setting and investment. The results can be seen in Figure 28.

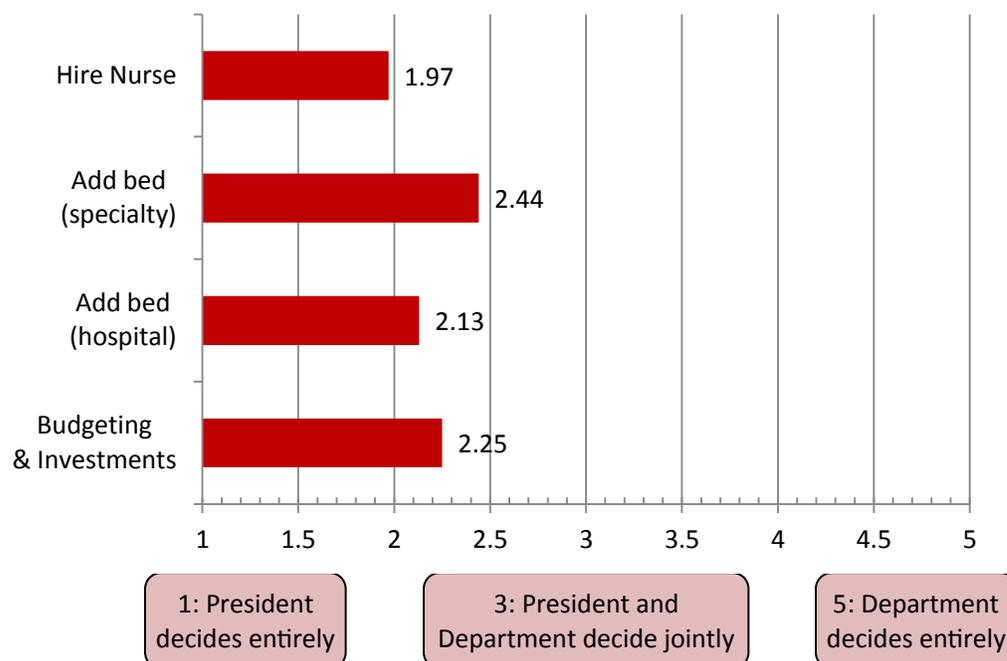


Figure 28. Management scores for Autonomy and Hierarchy Structures.

When it comes to decision-making in Chinese hospitals, top management has all the power and the bottom almost none. Hospital presidents exclusively make almost all personnel and strategic decisions, oftentimes without consulting heads of departments. Departments have limited autonomy when it comes to managing personnel and bed space because they have almost no authority to add personnel or beds when needed.

When we asked managers what was the largest capital investment that they could make without first consulting their presidents, 32 of our 39 managers — roughly 82 percent— responded with “none” or “zero.” To our surprise, answers did not change much across different, even higher level, positions: our highest-ranking manager said that he could only invest up to 50,000 RMB (less than USD \$10,000) without consulting the president of his hospital.

Workload and Incentives

During our interviews with hospital managers, heavy workload was a major source of complaint across all hospitals. Clinicians in China are required to work 40 hours a week, with 56% of interviewed clinicians meeting this requirement (Figure 29). However, 39% of clinicians claimed that their average weekly working hours exceeded 40 hours, reaching as high as 80 hours a week:

Average Weekly Working Hours in Chinese Hospitals

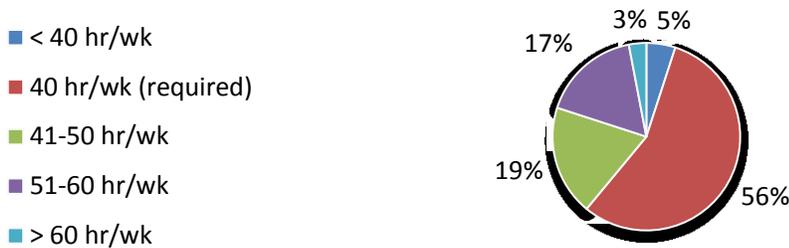


Figure 29. Chart of the average number of hours worked per week for physicians and nurses in Chinese Level 3 public hospitals.

The high average of weekly working hours could be due to the unbalanced distribution of hospitals and patient visits in China. Hospitals rated Level 3 by the NHFPC receive a disproportionately larger number of patient visits than hospitals that are Level 2 or Level 1, as reported by the FHFPC in Figure 30.

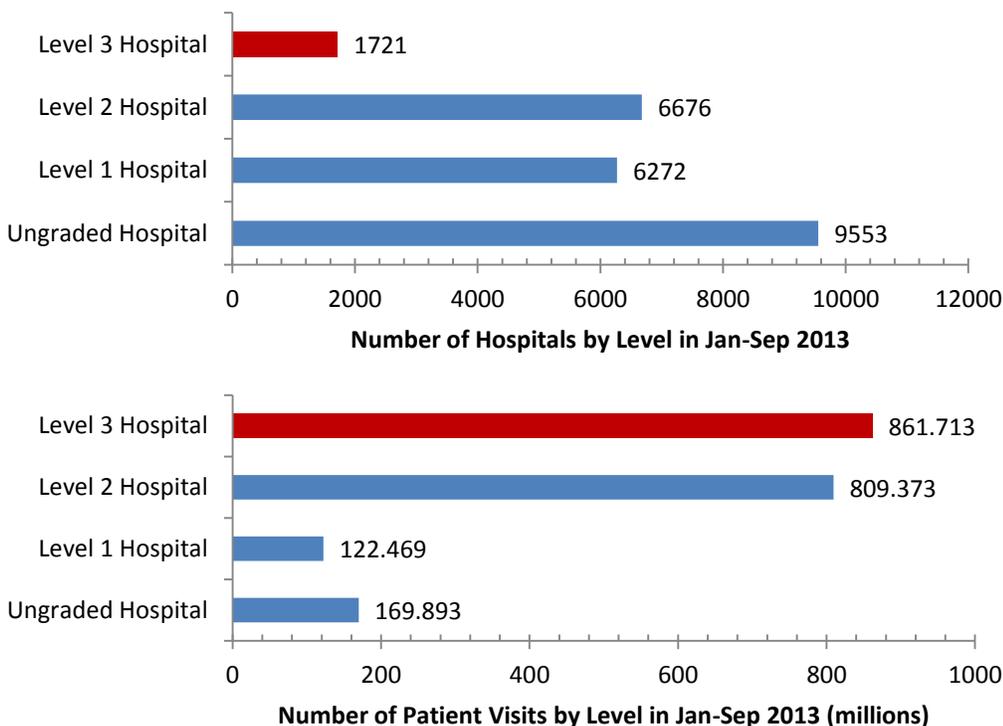


Figure 30. Number of hospitals and patient visits by hospital level in China from Jan-Sep 2013. Source: NHFPC, 2013.

Memorable Quotes:

Exposing problems

Analyst: "How do problems with patients typically get exposed?"

Manager: "Through arguments."

Further to the discussion in the Talent Management section, there are few financial incentives in place for physicians and nurses to accommodate this high workload. According to data from the Chinese National Bureau of Statistics, the average annual salary of a Chinese physician in 2010 was 35,478 RMB (\$5,711 USD), which was marginally higher than the annual salary of 32,244 RMB (\$5,190 USD) for an average urban employee in the same year (Ran et al., 2013).

According to Ran et al. (2013), the majority of Chinese physicians are full-time salaried employees of their hospitals, with their total income typically consisting of three parts: a basic salary, a bonus, and other benefits. The more granular breakdown is shown in Figure 31.

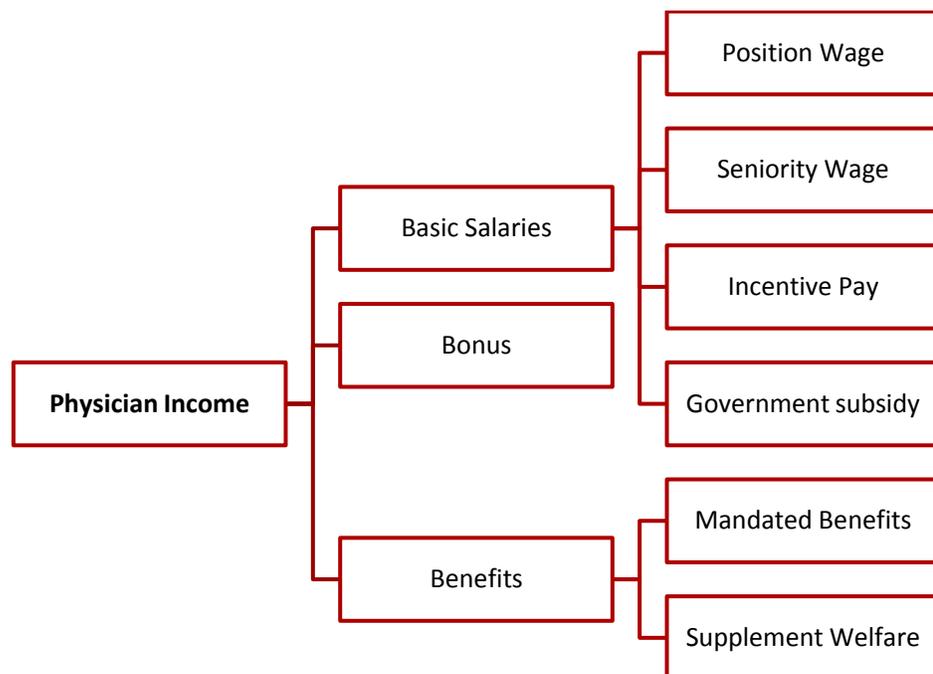


Figure 31. Physician income structure in China, broken down into salary, bonus, and benefits.

Basic salaries for physicians are calculated from the *Post Performance Payment System* and pay grades corresponding to position wage, seniority wage, and government subsidy are nationally set by the NHFPC, Ministry of Finance, and General Bureau of Labor.

Hospitals are given autonomy to allocate incentive pay, but this portion of the salary is usually replaced by bonuses and or other benefits that there are no national standards for.

According to our interviews with Level 3 public hospitals, monthly bonuses paid to nurses and physicians on average make up nearly 45% of their reported incomes. Bonuses accounted for at least half of 21 managers' incomes and only 5 managers reported bonuses constituting less than a quarter of their pay, as shown on the next page in Figure 32.

Reported Bonuses as a Percentage of Total Income

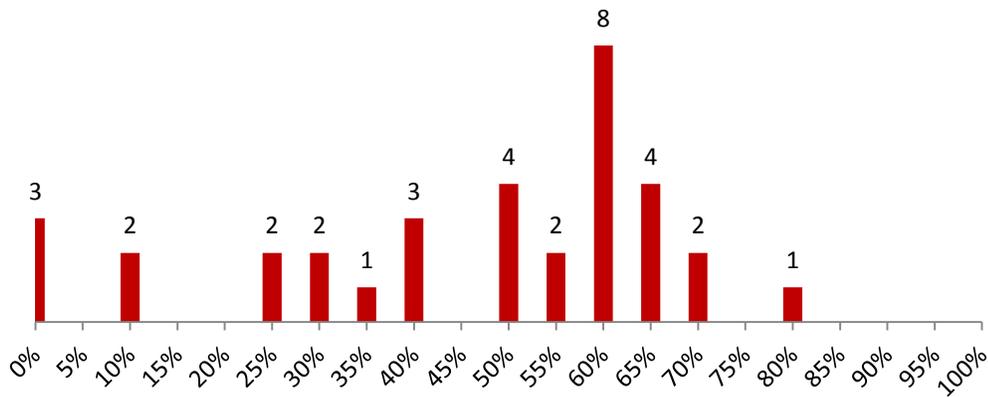


Figure 32. Frequency of reported bonuses as a percentage of total income for interviewed nurses and physicians at Level 3 public hospitals in China.

However, almost every manager that we talked to told us that everyone in their department received the same bonus – and oftentimes the same salary – regardless of their own personal performance. This is the standard practice in most Chinese hospitals where bonuses are directly awarded to physicians from profits at the hospital department level.

Supporting this observation, Yip et al. (2010) have previously criticized the Chinese public hospital system for not separating physician payments from incentives that might encourage hospitals to pursue profit-maximizing behavior. Instead, any incentives to providers should be well-measured and well-aligned with social goals of improving health care quality and efficiency.

RECOMMENDATIONS

Based on results from our GHMS-China study, we have compiled a list of recommendations to policy makers and hospital managers for improving management practices in public hospitals.

Hospital Managers

More efforts needed on talent management

- Individual performance needs to be emphasized more strongly than position and tenure in reward systems. Bonus structures should better reflect a clinician's performance and should be set based on individual performance indicators.
- Hospital managers should be more incentivized or held accountable for managing talent in their clinicians. Managers should also be given more tools for developing their staff or more rewards for performance.
- Hospital managers should have procedures for offering additional professional development opportunities to more staff groups.
- Hospitals should offer competitive benefits beyond hospital grade and reputation. A unique employee value proposition is essential for hospitals to build their talent pools.

Higher levels of autonomy needed

- Directors should have more autonomy to manage their departments, including firing and hiring personnel, adding of beds, setting budget and making investment decisions.
- For target management, hospital managers need to give clinicians more autonomy to set individual targets. The process for developing hospital goals process needs to extend to more staff groups so that goals would be more reasonable and aligned.

Review and adjust hospital operations with appropriate regularity

- Because of their important role as healthcare providers for the public, hospitals should adjust operations based on patient demand. Patient flow and hospital layouts should be optimized for and motivated by patients, rather than for internal, hospital accreditation, and other NHFPC evaluation requirements.
- Hospital managers should have more processes available to allow them to independently monitor and improve operation process regularly.

Actively review and improve performance indicators

- Instead of passively tracking performance, hospital managers should review indicators upon the basis of their staffs' individual performances to ensure that measurement indicators are meaningful.
- Individual performance indicators should be emphasized so that clinicians' performances can be formally tracked and accountable.

Health Policymakers

Higher levels of autonomy are needed for public hospitals

- One major goal of the State Council's 12th Five-Year Plan of Health Reform and the 2013 Third Plenary Session is the acceleration and systematic reform of public hospital internal governance structures. Our findings show that hospital leaders still have limited autonomy to manage hospital operations.
- The central National Health and Family Planning Commission and provincial-level healthcare system administrative bureaus should give hospitals higher levels of autonomy in managing hospital operation, including clinical performance, financial budgeting, and human resource management. Responsibilities for public hospitals, provincial health departments, and the NHFPC need to be more clearly defined.

Workload and salary reform for nurses and physicians are needed

- Human resource management, especially compensation systems for overtime work, in public hospitals need to be updated. Policy makers should have more processes in place to re-evaluate the labor value of nurses and physicians in China and adjust current salary systems to be more applicable for the current workload of the healthcare industry.
- Additionally, bonuses and reward systems should be tied more strongly to individual performance indicators rather than position and tenure.

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