

# *Standardization of Medical Equipment*

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**Abstract:** From six aspects of medical equipment standardization management, this paper introduces the system of medical equipment standardization management in hospital and some relevant practices, and expounds the importance of strengthening medical equipment standardization management in the early period of medical community policy. Through the combination of the current department equipment and other corresponding characteristics, so as to solve the problems existing in the current equipment and the future standardization of equipment after the use of some positive effects.

## **1. Introduction**

### **1.1 The Concept of Medical Devices**

Medical equipment refers to the instruments and equipment that act on the human body in the medical process, including the software needed for the operation of the equipment. These instruments or equipment may be used alone or in combination and, during their use, are intended to achieve the following intended purposes: prevention, diagnosis, treatment, monitoring and mitigation of disease; Diagnosis, treatment, supervision, remission and compensation for injury or disability; To study, substitute and regulate anatomical or physiological processes; And pregnancy control. At present, medical equipment has become an important field of modern medical treatment, the use and development of medical equipment is an important symbol of the degree of medical modernization and the future development direction.

### **1.2 The Concept of Standardization**

Standardization refers to the formulation, publication and implementation of standards in social practices such as economy, science or management to unify some repetitive things or concepts so as to obtain the best order and social benefits. The activity of making the same rules for actual or potential problems and achieving the best order within certain limits is called standardization. It includes the process of research formulation, publication, and final implementation. The importance of standardization lies in improving the applicability of products and services and promoting the progress and development of technology.

### **1.3 Concept of Standardized Management of Medical Equipment**

Standardized management of medical equipment is a general term of a series of work around the

construction and management of medical equipment, which is a very complicated project. It starts from the aspects of equipment, including from equipment plan to purchase, optional configuration, index of procurement, equipment installation, repair and maintenance, fault handling, equipment swap, use fixed number of year and scrap, measuring acceptance, the installed files, cost accounting, such as content and links, more important is the ability to influence from the perspective of hospital hospital "triple a" policy, The selection and practice of new projects affect the working efficiency of medical activities, and even the discipline construction and future development of hospitals. In the long run, it may even affect the competitiveness of hospitals now and in the future.

## **2. Current Situation of Medical Device Management**

### **2.1 The Legal System is Not Sound Enough**

In recent years, with the continuous expansion of China's medical reform, the update speed of policies and regulations related to medical equipment is relatively slow, which has gradually failed to keep up with the rapid development of the medical industry. With the introduction of a large number of advanced medical equipment at home and abroad, the management requirements for supporting the hospital are getting higher and higher. As the relevant departments of medical equipment, they need to be familiar with the bidding process and relevant documents of the current equipment, as well as the latest relevant laws and regulations, and to make the relevant documents and documents can be taken out at any time, so that the superior departments can spot check at any time.

### **2.2 Insufficient Investment in Medical Equipment Management**

Although the hospital equipment funds increase year by year, the special government funds available are still relatively small, which cannot fully develop the requirements. In addition, some departments only focus on the quantity of equipment, ignoring the actual use needs, which leads to serious waste of funds and reduces the investment in areas that are actually more needed. In buying up equipment at the same time also need to consider some supporting measures, such as equipment using the consumables or loss of use, which should consider investing in equipment management, and was supposed to be ready before buying, and as a result of the hospital equipment management institutions at present development time is shorter, less large equipment management experience, will lead to a waste of money.

### **2.3 The Medical Equipment Management System is Not Perfect**

With the deepening of medical system reform, the diagnosis and treatment technology rapid development, the use of the medical equipment is more and more widely, equipment management also has a new development direction, but the lack of perfect system of medical equipment management support, most hospitals have not fully realized the development of the management system, and the lack of specialist is responsible for, even if there is someone who's in charge, also simply hang a name, It does not have any substantive effect, which makes it impossible to form an effective management of medical equipment. Therefore, in the current new era, the equipment department also needs to seek new management methods, seek the best price and the most advanced equipment, and seek the normal operation of medical equipment. These are the important contents of hospital equipment management, as well as the work objectives of the medical equipment management department.

## **2.4 Low Degree of Informatization**

Informatization level is low, it will be from two aspects, on the one hand, informationization level is low, leads to information received is relatively slow, or it is difficult to accurately convey to the people, the most hospitals still rely on department notice, phone messages, coverage is low, the message can't complete, lack of real-time and precision. , on the other hand, the low degree of informatization performance in many current hospital equipment department are not implement paperless office, although by making processes and methods, equipment, information has been record is good, but in the process of actual use, the archives library or browse to cause damage to the paper material, or borrow for a long time, the file is missing, All of these have a great impact on the work. Nowadays, many hospitals have built their own information platforms, but in practical application, they are limited to recording and filing the entry and exit of equipment, and fail to realize the whole-process information management, such as equipment procurement, maintenance, maintenance and scrap, etc., and fail to achieve a high degree of information collection and sharing.

## **2.5 Medical Equipment Scrap Problem**

The disposal of medical equipment within the hospital department is not standardized, and it is scrapped at will without the support of the hospital equipment department and the assessment office, which has caused the waste of assets. Some departments do not understand the basic structure and treatment methods of the equipment, and do not grasp the knowledge of the use and maintenance of the existing equipment in place, which leads to the scrapping of some equipment before it reaches the scrap life. However, the management personnel of some departments do not pay enough attention to the handover of equipment when carrying out internal transfer, and the lack of relevant procedures for the daily transfer of equipment between departments leads to the lack of effective protection in the transfer of equipment between departments, and even the loss after the rotation of departments. All these have caused obstacles to the scientific management of equipment.

## **2.6 Poor Professional Personnel**

At present, all aspects of the hospital are developing rapidly, but it also causes a shortage of professionals. Biomedical engineering as medical projects, often belong to the unpopular major, many talents to clinical or medical departments, this leads to the hospital to find people on one hand, on the one hand, even to people is not the professional, at the same time equipment in hospital status is not high, treatment is relatively a line is low, the cause of the current medical professionals class a lack of talent. Due to the lack of professional personnel, the hospital has to assign personnel from other departments to manage the equipment, which to some extent endangers the safety of the equipment, is not conducive to the daily use and long-term maintenance of the equipment, and the service life of the equipment will be greatly reduced.

## **3. Standardized Hospital Operation Management System**

The quality management system based on follows the management idea, and draw lessons from the tertiary hospital evaluation standard, initially created to “process” as the core of hospital systematic management mode, the management pattern includes processes, post, system, performance, seven factors of management standard, strategy and culture, each elements constitute a system, The seven systems are integrated through an information standardized operation management platform.

### 3.1 Process System

Optimize and integrate the hospital process, establish a modern process management system with medical service process as the focus and management and guarantee process as the two wings, establish process database and process information management platform, form a process-based hospital management culture, and comprehensively improve the hospital operation management level and the quality and efficiency of service number. The operation of the process system can ensure the complete operation of the hospital. Under each process, there is a fixed processing method of the process. From the system, the whole process system is constantly improved and formulated. It plays an important role in the daily operation of the hospital to ensure that even if the post or responsibility changes, as long as the general process remains the same, things can be handled smoothly.

### 3.2 Post System

Taking each post as the basic unit, the hospital analyzes, sets, allocations and authorizes the posts, constantly adjusts and optimizes the organization and human resources structure of the hospital, and realizes the orderly and healthy organization and management through the establishment of a reasonable post management system. The establishment of the post system it is necessary to define the personal responsibility of each person, want to let everyone know what to do, what not to do, every step can be held accountable to the people, held accountable to the things, can do active traceability, active can chase, so as to ensure that each worker can be positive, and responsible for his own affairs, responsible for their jobs.

### 3.3 System

System is the most important part of the management, the scientific planning of the existing system of rules and regulations, and transform the current hospital prompted system facilitation and humanity, as much as possible to make the system that is associated with jobs and work, establish a system based on the process of tertiary system, through the perfect system, fundamentally solve some lazy attitude problem such as zheng to arm, So as to ensure the basic work of each employee, better for the equipment work to provide security.

### 3.4 Performance System

Napublic welfare demand as the guidance, based on the objective, effective and fair principles of design of hospital performance evaluation system, set up index library and examination of library, continuous improvement and optimization of performance evaluation system, and in practice to constantly adjust, can enter the performance, and are not limited to performance, but performance as a kind of power, motivate people, Driving force to ensure that medical equipment is used to the best of its ability to achieve management objectives. The appearance of performance enables everyone to get remuneration based on their workload, so as to ensure the enthusiasm of the team. At the same time, in the case of loss and loss, the loss will be minimized as far as possible.

### 3.5 Standard System

Establish hospital standardization department, can actively participate in and learn the advanced management experience at home and abroad, and transform its management and technical standards into the most suitable hospital standard system for the development of the hospital, and do a good

job of homogenized management. Actively participate in all kinds of creation work, and keep records of activities, highlight the standards of the hospital in the continuous learning and progress, so that it can better serve the hospital work

### **3.6 Cultural System**

Hospital culture includes spirit culture, management culture, service culture and material culture. Actively promote hospital culture, promote the norms of medical ethics in the new period, to achieve “care for the patient, to study medicine, the reasonable diagnosis and treatment, the careful making, integrity, law-abiding, recommends the double xin”, the hospital culture into every medical personnel, medical ethics as a daily key supervision project, join the enhancement inspection supervision, To ensure that every medical staff can hold their own red lines. The excellent staff culture can benefit all of us, keep learning in the progress, and integrate into the big family of the hospital.

## **4. Main Achievements of Standardized Management**

### **4.1 Effective Technical Innovation.**

Through the standardized system, the technical review of advanced medical equipment can be strengthened, and the investment of basic and specialized, refined and sophisticated medical equipment can be enhanced. In addition to ensuring the normal use of basic medical equipment, the construction of these projects can also improve the level of medical equipment and medical service capacity of the whole hospital. For some projects that need to be trained in key areas, we should strengthen the promotion efforts, let the hospital give play to its own specialty projects, create key departments and projects, so as to make use of the advantages of equipment, enhance the competitiveness of the hospital itself, enhance the value and comprehensive strength of the hospital, and ensure the long-term development and continuous progress of the whole hospital.

### **4.2 Reasonable Configuration Structure.**

Continuously adhere to quality construction, focus on strengthening connotation development, and pay attention to the matching of targets and conditions. In the continuous development of medical equipment, combining with the actual situation of the area in which the hospital is located, fully consider factors such as technology, capital, talent and benefit, adhere to quality construction and pay attention to connotation development. It is necessary to ensure the type scale and quantity of large equipment as well as the holding quantity of equipment of more than ten thousand yuan. In continuous development, it is gradually reasonable to configure. Want to tighten financial expenditure already, want to use the allocation of resources reasonably again. Set up the equipment allocation department, give full play to the mobility of personnel and equipment, put more places in the departments with large demand, and make reasonable allocation in the departments with small demand, so as to achieve the optimal solution of equipment resources, ensure the reasonable operation of equipment, and achieve the maximum benefit.

### **4.3 Appropriate Management Mode.**

Adjustment of management mode, lies in the information management of medical equipment, medical equipment use and maintenance of homework into information technology area, through continuous adjustment of merger, repeated my original multifarious configuration program becomes

simple and orderly operation, changed the working process of the clinical medical treatment activity, improve the efficiency of the doctors, as far as possible to avoid equipment failure in effective range, It ensures that the equipment in the department can run for a long time, shortens the average hospital stay, increases the utilization rate of hospital beds, reduces the medical costs of patients, improves patient satisfaction, and achieves the best diagnosis and treatment effect. The use of this management mode is more suitable for the development of the current department, so that the relationship between doctors and patients is more harmonious.

#### 4.4 Good Use Mechanism.

The sound operation of medical equipment also cannot be separated from the good use mechanism. Therefore, it is necessary to give preferential policies of different degrees to basic and innovative medical equipment in terms of cost depreciation life, bonus extraction and other aspects according to the benefit, efficiency and nature of medical equipment operation while taking into account the benefits of doctors and patients. Appraisal system is established and the equipment in use process problems in the summary, summarized, set up equipment using annotations, printing equipment use Julie: maintenance, equipment department and clinical departments cooperate with each other, regular maintenance and maintenance, regular inspections for key equipment, maintenance, make the equipment use standardization, to minimize the wastage of the equipment. The hospital can also conduct assessment and training for equipment users on a regular basis. Let medical workers also join in the maintenance team of equipment, and strive for the maximum efficiency of equipment use.

#### 5. Conclusion

The continuous progress and development of modern medical technology. All these have raised the threshold of the use of medical equipment, and with the continuous improvement of the precision of medical equipment, the difficulty of equipment management is also the original greater. In this case, the traditional equipment management has been unable to meet the needs of modern. In the maintenance and management of traditional equipment, the efficiency is not high and the information level is low, which hinders the effective management of medical equipment, so the hospital work is very passive. Modern hospitals must pay attention to equipment management, recognize the existing problems, fully understand the role of medical equipment, as well as the importance of equipment to medical work. In this way, the medical service level of the hospital can be improved continuously and the health of the hospital can be promoted continuously.

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