



# The Sir Run Run Shaw Hospital Saves More Lives with Motorola Mobility Solution



"Our aim is to provide patients with safe, highly efficient, convenient and economical medical services. With the help of Motorola, we are resolutely advancing towards this goal."  
 - He Chao, Director, Sir Run Run Shaw Hospital

## Company Overview

The Sir Run Run Shaw Hospital, affiliated to the Zhejiang University School of Medicine, is a modern hospital ranked amongst the best in China. It was financed by the late Hong Kong industrialist Sir Run Run Shaw and is co-managed by the Medical Centre at Loma Linda University in California.

## The Challenge: Improving Accuracy And Timeliness Of Patient Information

For hospitals to provide high-quality service, they must administer the right treatment in the quickest manner to ensure its ability to save lives. A hospital's information system is what allows them to deliver the highest level of service.

Older workflow methods based on hard-wired information systems seemed inefficient by newer standards. Medical staff had to write a patient's life signs and treatment information on paper before entering it into a computer terminal. Not only was this time-consuming, it added steps to the workflow that led to an increase in errors.

It was nearly impossible to have on hand the entire history of doctor's orders since some of that information did not exist in electronic format. However, incomplete treatment history was only the tip of the iceberg. Errors in billing and mistaken identities of patients could occur when patients with the same name were admitted or when severely ill patients were moved from one area to another area of the hospital.

"We chose Motorola's wireless medical system because it has been successfully implemented in many hospitals worldwide. From our experience, its success in the deployment at Sir Run Run Shaw hospital hinged on its ease of integration with existing medical information systems, especially with workstations," said He Chao, Sir Run Run Shaw Hospital Director

## Customer Profile



**Company**  
 Sir Run Run Shaw Hospital

**Industry**  
 Healthcare

**Challenge**  
 Ensuring accuracy and efficiency in the workflow

**Solution**  
 WS5100 wireless switches, AP300 network antennae and MC50 handheld mobile



### **Solution Features**

Wireless networking, barcode scanning, mobile computing and centralized intelligence and management capabilities

### **Benefits**

Increased patient satisfaction level.  
Cost savings with a paperless environment.  
Increased accuracy of data captured.  
Increased productivity of medical staff.  
Enhanced timeliness saved more lives.

## **The Solution: Accessible, Wireless Tools To Give Accurate, Real Time Information**

Improving information management was a key goal of the management at The Sir Run Run Shaw Hospital as it was needed to boost its competitive advantage. In 2005 it selected the wireless medical system solution provided by Motorola and its partner, Zhejiang Yinjiang Technology Group in the Huadong area.

The solution includes WS5100 wireless switches, AP300 network antennae and MC50 handheld mobile terminals. The WS5100 provides powerful, centralised intelligence and management capabilities and the MC50 is an enterprise digital assistant combined with barcode scanning capabilities. It features advanced data capture, flexible voice and data communication capabilities.

With wireless LAN covering the entire hospital, the medical staff can now access the information system from anywhere in the building. Doctors and nurses just need to scan a patient's barcode wristband with the MC50 which identifies them immediately and retrieves their medical history automatically. The medical and nursing staff can now work beside the patient's bedside, giving them more attention while at the same time ensuring safe and accurate treatment. Doctors can now verify patient's medical information real time, right by the patients' bedside and take prompt decisions based on the patient's immediate needs. Some of these decisions could be life-saving.

He Chao, Sir explains, "With the use of Motorola's latest generation of MC50 units as the basis of our patient bedside mobile information system, the standard of service offered in our hospital has greatly improved. We are now much closer to reaching our overall goal of maintaining pace with international standards and also of adhering to our patient-centric service philosophy."

Motorola's WS5100 is designed for use in the healthcare, education and retail industries. In the healthcare sector it helps hospital staff achieve true mobility; drug management, sample collection, blood transfusion tests, asset and material management, remote patient monitoring and nurse calls can be deployed wirelessly, increasing the efficiency rate of many common activities.

The tri-mode, dual-band wireless access point AP300 supports 802.11a/b/g standards and expands the wireless connectivity of WS5100. The combination reduces deployment costs, increases network functions and improves the safety of the WLAN. High flexibility and low deployment costs are the biggest advantages of the Motorola AP300.

The data capturing abilities integrated into the MC50 include 1D and 2D barcode scanning and image capturing as well as the 1.0 mega pixel colour photo-taking function. Equipped with Motorola's MSP (Mobility Services Platform) mobile management software, the hospital can quickly deploy and manage thousands of MC50 devices. Furthermore, all handheld mobile terminals and wireless networks are managed via a user friendly web-based interface.

According to He Chao: "The reliability of every aspect of the MC50, from the battery contacts to keypads to acoustics, makes it capable of satisfying the performance demands of high-volume, low-downtime transactions. Its remarkable manageability allows organisations like ours to quickly and completely converge it with present and planned corporate IT facilities."

From the patient's point of view, once the admission procedures have been completed the system notifies the relevant doctor in real time, allowing for the efficient scheduling of consultations or surgery. If additional consultations are required, the wireless medical system provides an extremely convenient way of fixing the appointment. The MC50 mobile terminal instantaneously sends the information to the relevant administrative office, which will arrange for the appointment via the wireless network. In comparison to the conventional handwritten consultation slip, the electronic consultation slip greatly improves the efficiency of hospital staff.

### **The Benefits: Far-reaching Patient Care And A Paperless Environment**

Barcoded patient wristbands are widely used in hospitals. They provide a fast, effective and accurate method of data capture of patient information. The wristband is a major component of the complete patient identification system. It helps to determine the identity of a patient starting from admission, through treatment up to and until discharge. Barcodes are used to simplify not only the admission process, but also the distribution of drugs, infusions, transfusions, sample collection and processing, surgery and billing settlement. The technology benefits go further by decreasing and even preventing medical accidents.

In the course of providing nursing care, the Motorola's wireless medical system establishes a patient-centred nursing model. Nurses enter life sign data into the system via the MC50 mobile terminal. Not only does this update the patient's information in real-time and increase the accuracy of the data, it also lightens nurses' workload to a large extent and avoids repeat registrations. Carrying a MC50 mobile terminal is very convenient. Nurses can place a unit in their pocket or wear it on their wrist. All the information required is available through this device.

"Due to the successful launch of Motorola's wireless medical system, tasks performed at the Sir Run Run Shaw Hospital have been simplified, leading to a paperless work environment. The efficiency of medical workers has markedly improved and the communication of information has also increased, truly simplifying everyone's work," commented He Chao.

Doctors have become more efficient as they now spend less time writing down the records and waiting for patients' test reports. As the execution of doctors' orders is confirmed electronically, the life cycle of the orders is significantly reduced and the risk of human error has subsequently been minimised.

In addition to this, the status of orders is accessible at all times, thereby making it possible now to track all nursing procedures and actions. Nurses save time as they are finally free of the hassle of paperwork. Writing errors are reduced and efficiency is raised tremendously. At the same time, the quality of clinical nursing is assured and nurses have more time to tend to patients. The achievement of a patient-centred facility is thus closer to being realised.

"A cutting edge management model and modern information management system have greatly augmented the competitiveness of the hospital. The patient satisfaction level has reached 97%. Amongst similar hospitals in China, the Sir Run Run Shaw Hospital has the highest bed turnover rate and the lowest antibiotic usage rate. The average number of hospitalisation days is now only 8.95" Said He Chao.



**MOTOROLA**

Motorola Enterprise Mobility business, Room 11B2 11th Floor, Hanwei Plaza, No.7 Guanghua Road, Chaoyang District, Beijing 100004 China, +86.10.6561.0006 [www.symbol.com.cn](http://www.symbol.com.cn)

MOTOROLA and the stylized M Logo are registered in the US Patent & Trademark Office. All other product or service names are the property of their respective owners. ©2007 Motorola, Inc. All rights reserved.