



Spurring innovations for a healthier society

West China Hospital of Sichuan University forges ahead with cutting-edge medical research and comprehensive clinical care.

From its beginnings as a small clinic to what is now a top treatment centre, West China Hospital of Sichuan University has a long history of success. Its president, Weimin Li, attributes this record to continual innovation.

“Looking back on the last 130 years, innovation is integral for our progress. It’s paramount in clinical care, hospital operation and medical research, as we pursue solutions to a healthier society,” says Li, who is both president of West China Hospital, and dean of the West China School of Medicine, Sichuan University.

Cunren Hospital and Renji Hospital, forerunners to the current institution, both opened in 1892. They later provided training to health professionals at the School of Medicine of West China Union University, one of the country’s first medical schools.

After a series of reforms and a merger with Sichuan University in 2000, West China Hospital has rapidly grown into the largest and most advanced hospital in western China, and has been ranked second in China’s Hospital Rankings by

Fudan University for 12 years in a row, with 30 specialties among the top 10 in their respective areas.

“We are now a multidisciplinary hospital with 4,300 beds, a national hub for critical disease treatment, a major institute for medical education, and a national centre for medical research and technological innovation,” Li says.

Pursuing clinical excellence

West China Hospital has been driving medical innovations to meet clinical needs for many years. It has raised its profile in a variety of clinical specialties, such as anesthesiology, urology, respiratory medicine and critical care.

The hospital is home to one of the world’s largest anesthesia and operation centres. Approximately 250,000 procedures under anesthesia are performed here each year. By introducing novel techniques — such as ultrasound, AI and deep learning — for diagnosis and monitoring, the centre has reduced postoperative complications by nearly 30%.

A pioneer in kidney transplantation, the hospital’s

urology department has performed more than 140 robot-assisted kidney transplants. These include a transvaginal insertion of a living donor kidney graft, a major advancement in minimally invasive surgeries, to accelerate postoperative recovery. This achievement is a national first.

The hospital’s Department of Respiratory and Critical Care Medicine has contributed significantly in the fight against COVID-19. After the outbreak of the disease in January 2020, the department sent an emergency medical team to Wuhan to help combat the spread. As the pandemic unfolded, it sent teams of doctors and nurses across China and Italy. Meanwhile, the researchers used 5G technology to diagnose COVID-19 cases remotely, and developed an AI system to screen lung lesions within seconds. With their expertise and innovative approach, the team reduced mortality rates.

Optimizing management

The hospital has also been optimizing its management to improve efficiency, benefiting a broader range of patients.

“We have introduced a lean hospital management system, which helps us better allocate our vital resources such as staff, capital, equipment, and beds,” says Li. He aims to build an ‘intelligent hospital’ by

deploying advanced information technology, such as 5G, big data and cloud computing, further enhancing efficiency.

These moves have made a big difference, especially in reducing treatment costs for outpatients and inpatients. “This is one of our major goals, along with providing best medical service. By bringing down expenses, we can lower the financial burden on patients,” notes Li.

The hospital is also among the first in China to establish a day surgery centre. Since 2009, it has completed more than 220,000 surgeries across many different specialisms, making up more than 20% of the hospital’s total surgical procedures. Every operation performed as a day surgery reduces the cost of a procedure by at least 20%.

Meanwhile, the hospital has built an alliance with other medical institutions in western China. “We aim to build a healthcare ecosystem, expanding quality medical resources to benefit more patients,” Li explains.

Translating medical research

West China Hospital is one of the first in the country to combine healthcare with research. Starting in the 1990s, the hospital set up laboratories and has attracted top medical talent to advance research.



WEIMIN LI
President of West China Hospital of Sichuan University

“In addition to meeting clinical needs, we are committed to leading the progress of medical science,” says Li, who adds that the hospital now has one of the largest research teams in the country, with more than 1,000 postdoctoral and full-time researchers, including more than 100 of China’s top researchers.

These researchers have generated impressive outputs. A recent analysis based on data from Nature Index, which tracks high-quality research articles published in top journals, shows that West China Hospital ranks first in the country and 11th globally among all healthcare institutions.

“However, medical research that exists only in literature is of limited value to patients,” explains Li who says that the hospital is focused on incubating research findings

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into clinical innovations via translational medicine platforms.

It has formed an integrated innovation platform — covering target discovery, new drug screening, preclinical and clinical trials, and post-marketing evaluations — bridging basic, translational and clinical research.

The hospital has the National Centre for Translational Medicine, which is the first of its kind focusing on biotherapy in China. More than 50 full-time researchers are currently working on nearly 100 projects.

“We are moving on with the mission of incubating 50 to 100 breakthrough bio-therapeutic candidates and products over the next ten years, with an emphasis on biological vaccines, antibodies, gene and cell therapies,” says Li. “They will be used for prevention, diagnosis and treatment of major diseases such as tumour, cardiovascular and cerebrovascular diseases, metabolic diseases and infectious diseases,” says Li.

Li has the hospital’s sights set on a strategy of continuously spurring medical innovation, advancing international collaboration, and training top talent to improve outcomes for patients, and advance West China Hospital’s status as a world-leading medical institution. ■

