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# Integrated high-quality smart Healthcare capabilities of Taiwan

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**Delivering excellent health values and encouraging institutions to persevere with healthcare quality improvements, with the aim of jointly promoting the health and well-being of the people**



Taiwan's healthcare development is supported by its greatest precision healthcare tech service in Asia pacific with an advanced digital medical solution, innovative biomaterials, and organ-on a chip for precision cancer medicine.

In addition to MedTech facilities, Biotech and the pharmaceutical industries also have a stronghold in Taiwan through its bolster R&D capability firms such as Taipei's Hsinchu Biomedical Science Park, Central Taiwan Science Park, Southern Taiwan Science Park and Nangang Software Park. Taiwan has positioned itself in the world's biomedical value chains by enhancing cooperative efforts with the U.S. and Europe biomedical hubs. Taiwan's advances in biomedical materials are conducive to developing products more suitable for Asians. Taiwan is recognized globally for its competitive and cost-effective medical technology.

**Joint Commission International:**

The Ministry of Health and Welfare, Taiwan Hospital Association, Taiwan Nongovernmental Hospitals & Clinics Association and Taiwan Medical Association have jointly found and established "Joint Commission of Taiwan (JCT)" to conduct accreditations, Certifications, and on-site inspection activities in biomedical sectors. JCT is the professional accrediting organization certified by the International Society for Quality in Health care Ltd. (ISQua). JTC is committed to promoting quality and patient safety concepts, the use of quality management tools, and medical staff training. Additionally, JTC has built a resource sharing platform with medical partners, delivering excellent health values and encouraging institutions to persevere with healthcare quality improvements, with the aim of jointly promoting the health and well-being of the people.

**Healthcare Quality Improvement Circle (HQIC):**

Since 2000, JCT has promoted the 'Healthcare quality Improvement Circle (HQIC)', a publication and competition campaign. The campaign encourages front-line medical staff to form a team, select a quality improvement theme, to use the PDCA management cycle as a basis, and to make continuous improvements through teamwork, big data, and statistics.

Surgical robotics for minimally invasive surgery through Da Vinci advanced surgical system has been widely applied in urology, gynaecology, general surgery, colorectal surgery, cardiac surgery, thoracic surgery, as well as head and neck surgery. Around 30 of the 3600+ da Vinci systems have been deployed in Taiwan, which is the highest rate among all Asian

countries.

**Taiwan's medical care standards**

Taiwan's medical technology has been ranked superior in Asia by the National Geographic Channel. Taiwan's medical standards and procedures are renowned internationally with efficient and successful treatments for orthopaedics, liver replacement, cancer survival, and living body transplantation and many more.

**Organ transplantation:** Taiwanese surgeons have set numerous Asian and Global records by endeavouring in technical breakthroughs in transplant medicine, especially in liver transplantation with a one-year survival rate of 86% and five-year survival rate of 74% patients. Taiwan's hospitals have good 3-year survival rates for organ transplants like kidney transplant and lung transplant which surpasses the average of the world.

**Cardiovascular management**: The Cardiologists in Taiwan have invested great efforts in promotions for the prevention of cardiovascular diseases. Taiwan is known for its earliest attempt and maximum successful heart transplant in Asia with competitive treatments costs compared to other SE countries.

Taiwan's cardiovascular medical care has its own records in rescuing the patients with acute myocardial infarction, where the average balloon angioplasty time at the hospital is only 53 minutes, exceeding the international 90-minute emergency standard. In addition, the success rate of atrial fibrillation ECG and children's heart surgery are as high as 90%, and the coronary artery bypass surgery accounted for 83% success rate.

Dr Shih-Sheng Chang of China Medical University Hospital Taichung, says, "Taiwan also has excellent quality in AMI (acute myocardial infarction) project with its widely available programs throughout the country. Emphasis is now put on advanced health examinations for early diagnosis with EKG, ECG, and treadmill electrocardiography. CMUH serves more than 1800 cases of percutaneous coronary interventions and 600 AMI patients. The in-hospital mortality rate of AMI is 5%. Its investment in quality medical care has been proven by the recognition from Taiwan SNQ National Quality Award and the JCI Evaluation".

**Reproductive medicine:** Taiwan is highly competitive in the global market for 'Assisted reproductive technology (ART)' with an average of 36.7% successful implantation rate at affordable treatment cost.

**Cancer Care**: With precise cancer treatment strategy and the adoption of the NCCN Clinical Practice Guidelines, Taiwan offers excellence in personalized medical service for cancer care. Taiwan has achieved superior milestones in cancer treatment since three decades with a five-year survival rate of up to 73%, also 91% survival rate for breast cancer, 32% for lung cancer, 68% for colorectal cancer, and 99% for the thyroid cancer has been observed.

Chang Gung Memorial Hospital in Taipei adopted the first proton and radiation therapy centre as one of the world's most advanced and precise medical procedures designed to fight cancer. The advanced and most winning cancer treatment utilizes a pencil-thin proton beam through sophisticated equipment which accurately targets a tumour without damaging normal tissue. CGMH's Proton therapy with US$165.1 million facility boasts four proton treatment and ten X-ray treatment rooms and is capable of providing linear accelerator treatment to 3,000 patients and proton beam treatment to 1,500 patients annually.

**Craniofacial reconstruction**: Taiwan has the first craniofacial reconstruction centre in Southeast Asia. With its professional specialists and comprehensive medical team, Taiwan's craniofacial reconstruction centre has achieved a 100% success rate in cleft palate and cleft lip repair.

Surgeons in Taiwan are highly experienced in arthroplasty and joint replacement, with approximately 47,000 cases of arthroplasty performed annually. Patients benefit from minimally invasive surgeries for small incisions and faster recovery.

Dr Chen Hsien-Wei, International Medical Centre, Chang Gung Memorial Hospital(CGMH), say's "Chang Gung Memorial Hospital with its network of seven hospital branches over Taiwan has been recognized as a powerhouse and pioneer in remedial innovation, research and teaching. It is also the largest academic centre ever accredited by the Joint Commission International [JCI (2014-2017)]. Having been featured in National Geographic Channel's documentary, "Taiwan's Medical Miracle," our hospital's medical achievements are both nationally and internationally acclaimed. At Chang Gung Memorial Hospital, we prioritize patient-centred care, offering domestic, as well as cross-border patients with quality medical services, state-of-the-art technology, and superior values".

**Health care boosted with Smart Technology:**

The Joint Commission of Taiwan built "Health Smart Taiwan Platform" to collect high-quality smart medical products and solutions in Taiwan to provide 4 unique platforms for domestic and foreign medical institutions to find their needs and also let

companies promote their products and sales to foreign countries.  The 4 functional platforms are; Product and solution search, Promotion of successful cases, Reports of new industrial knowledge, Matching of products and demands.

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