At long last, we are finally at the tail end of the pandemic. As Covid-19 loosens its hold on the world’s healthcare systems, we are faced with many of the same issues that had plagued hospitals long before the pandemic started. These problems include staff burnout, unequal access to healthcare services, the need to develop adequate sustainability measures, and the continuous demand for innovation, just to name a few.

At this year’s IHF Awards, we have seen how healthcare providers across the world have worked tirelessly to develop a more inclusive, sustainable, and equitable healthcare system for all. This year’s roster of awardees include pioneering projects such as the implementation of large-scale environmental initiatives; the rollout of data-driven wellbeing initiatives for healthcare professionals; and the provision of quality healthcare services to underprivileged patients in some of the world’s most challenging communities.

The projects featured in these pages only represent a fraction of the efforts launched by our members and participants. Over 400 entries were submitted this year, marking the highest number of submissions since the programme was launched in 2015. These numbers show that despite challenges, healthcare leaders continue to devote their time and effort into crafting projects that promote the IHF’s vision of improving the standard, quality, and level of healthcare service delivery across the world.

We are grateful to the invaluable work of our Awards Committee, without whom this Congress will not be possible. The selection of our winners required the input of our 40 health leaders and experts from across the globe, who meticulously reviewed all entries and determined winners this year. We also thank those who have graciously sponsored this year’s Awards: Dr. Kwang Tae Kim, Austco, the Japanese Ashikaga Red Cross Hospital and Nikken Sekei, the American College of Healthcare Executives (ACHE), the American Hospital Association (AHA), the Ministry of Health of the Sultanate of Oman, and Seddiqui Holding. We also extend our gratitude to Vizient, who generously sponsored the gala dinner tickets of winners and the members of the Awards Committee.

The IHF Awards is a celebration of the ingenuity and sacrifice of healthcare providers across the world. We congratulate the awardees for a job well done, and laud their efforts to improve healthcare delivery in their respective communities. We are grateful to all those who have made this programme possible, and we look forward to welcoming you again next year as we continue to strive to provide better healthcare services for all.
IHF AWARDS 2022

Recognizing Excellence in Healthcare

The projects and programmes presented in each entry shine a light on innovative, impactful work in hospitals across the globe. In recognizing these achievements, the IHF Awards are an important aspect of the IHF’s commitment to international knowledge exchange. Motivated by a shared commitment to well-managed hospitals, the winners of IHF Awards exemplify good practices that improve the level, quality, and sustainability of healthcare service delivery.

The International Hospital Federation Awards 2022 is sponsored by the American College of Healthcare Executives, American Hospital Association, Austco, Japanese Red Cross Ashikaga Hospital and Nikken Group, Seddiqi Holding, Ministry of Health at the Sultanate of Oman, Dr Kwang Tae Kim, and Vizient.

The IHF Awards recipients in each category are as follows.

<table>
<thead>
<tr>
<th>DR KWANG TAE KIM GRAND HOSPITAL AWARD</th>
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<tbody>
<tr>
<td>GOLD WINNER: Cleveland Clinic Abu Dhabi (United Arab Emirates)</td>
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<tr>
<td>Several Hospital (Republic of Korea)</td>
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<tr>
<td>SILVER WINNER: Tan Tock Seng Hospital (Singapore)</td>
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<tr>
<td>BRONZE WINNER: Al Qassimi Hospital (United Arab Emirates)</td>
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<tr>
<td>King Faisal Medical Complex, Taif (Saudi Arabia)</td>
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<tr>
<td>HONOURABLE MENTION:</td>
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<tr>
<td>Apollo Hospitals, Chennai (India)</td>
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<td>Apollo Proton Cancer Centre (India)</td>
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<td>AZ Maria Middelares (Belgium)</td>
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<td>Dubai Hospital – Dubai Academic Health Corporation (United Arab Emirates)</td>
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<tr>
<th>SEDDIQI HOLDING EXCELLENCE AWARD FOR CORPORATE SOCIAL RESPONSIBILITY</th>
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<tbody>
<tr>
<td>GOLD WINNER: Hôpitaux Universitaires de Genève (HUG) (Switzerland)</td>
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<tr>
<td>Shaping the sustainable hospital of tomorrow: elaborating a sustainability strategy with the hospital’s stakeholders</td>
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<td>SILVER WINNER: Cardioinfantil Foundation</td>
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<td>Giva a Life</td>
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<td>BRONZE WINNER: Apollo Children’s Hospitals, Chennai (India)</td>
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<tr>
<td>Save a Child’s Heart initiative</td>
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<td>HONOURABLE MENTION:</td>
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<tr>
<td>Apollo Proton Cancer Centre (India)</td>
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<tr>
<td>“I Can-cer Vive”: cancer survivorship follow up care in the community</td>
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<tr>
<td>Democrito O. Plaza Memorial Hospital (Philippines)</td>
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<tr>
<td>Freeing the unfree: community-based active case finding interventions for tuberculosis among persons deprived of liberty in Agusan del Sur</td>
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<tr>
<td>Emirates Health Services (United Arab Emirates)</td>
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<tr>
<td>EHS integrated services and telehealth program: towards a greener, accessible, more sustainable healthcare model</td>
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<tr>
<td>Mariano Marcos Memorial Hospital and Medical Center (Philippines)</td>
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<tr>
<td>Beyond screening: increasing the G6PD return rate in the province of Ilocos Norte</td>
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<tr>
<td>Parkridge Health System (United States)</td>
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<tr>
<td>The Orchard Knob Collaborative to impact health disparities</td>
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<tr>
<td>Prince Sultan Cardiac Center (Saudi Arabia)</td>
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<tr>
<td>Qassim Primary Angioplasty System “QAPAS”</td>
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### SULTANATE OF OMAN EXCELLENCE AWARD FOR HEALTH SERVICES DURING CRISIS

**GOLD WINNER:** Shaukat Khanum Memorial Trust (Pakistan)  
Cancer hospital stockpiles: strategizing for an efficient and sufficient inventory list of essential items for setups serving in low-income countries

**SILVER WINNER:** Manila Doctors Hospital and Circle of Partners (Philippines)  
REDI (Responsive and Efficient Disaster Intervention) health intervention to rehabilitation: an inclusive and ecologically responsible disaster response program

**BRONZE WINNER:** Philippine Children’s Medical Center -Pediatric Blood Center (PedBC) (Philippines)  
The Pediatric Blood Center rises in the midst of crisis: blood bank donation innovations during the Covid pandemic

### HONOURABLE MENTION:

- **Apollo Hospitals, Chennai** (India)  
  Innovation in infection control: a recipe for success

- **Democrito O. Plaza Memorial Hospital** (Philippines)  
  Covid-19 home care information system (CHOCIS): enabling advanced and digitized information system in mitigating Covid-19 pandemic in Agusan del Sur

- **Dr. Jose N Rodriguez Memorial Hospital and Sanitarium** (Philippines)  
  “Picking up the pieces: the Dinagat Islands experience” The deployment of DJNRMHS health emergency response team to the province of Dinagat Islands in the aftermath of super typhoon Odette

- **HOPE Foundation for Women and Children Bangladesh** (Bangladesh)  
  HOPE Field Hospital for Women, a safe haven for women and children living in the Rohingya refugee camps

- **People’s Hospital 115** (Vietnam)  

### ASHIKAGA-NIKKEN EXCELLENCE AWARD FOR GREEN HOSPITALS

**GOLD WINNER:** Cleveland Clinic Abu Dhabi (United Arab Emirates)  
Cleveland Clinic Sustainability Program (Green by Construction and Green by Operation)

**Japanese Red Cross Matsuyama Hospital** (Japan)  
Achievement of comfortable medical treatment environment, disaster-resistant, environmentally friendly green hospital

**SILVER WINNER:** Aga Khan Health Service (Pakistan)  
Commitment to achieve net zero by 2030

**BRONZE WINNER:** Buddhist Dalin Tzu Chi Hospital (Taiwan)  
Race to zero by 2050, climate action of the hospital- from patients, people to planet

### HONOURABLE MENTION:

- **Abdullah bin Omran Hospital for Obstetric and Gynecology** (United Arab Emirates)  
  Safeguard the environments by reducing the carbon emission

- **Apollo Proton Cancer Centre** (India)  
  Nature’s Footprint

- **Centro Hospitalar Entre Douro e Vouga** (Portugal)  
  Waste reduction in cataract surgery, a simple change with great impact

- **Hôpitaux Universitaires de Genève** (HUG) (Switzerland)  
  Shaping the sustainable hospital of tomorrow: elaborating a sustainability strategy with the hospital’s stakeholders

- **Newcastle Upon Tyne Hospitals NHS Foundation Trust** (United Kingdom)  
  Towards a net zero carbon supply chain

- **NMC Royal Hospital, Khalifa City, Abu Dhabi** (United Arab Emirates)  
  Achieving energy savings by implementing energy efficiency measures to make green hospital
**AMERICAN HOSPITAL ASSOCIATION EXCELLENCE AWARD FOR HEALTHCARE WORKERS’ WELLBEING**

<table>
<thead>
<tr>
<th>GOLD WINNER</th>
<th>SILVER WINNER</th>
<th>BRONZE WINNER</th>
<th>HONOURABLE MENTION</th>
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<tbody>
<tr>
<td>Tan Tock Seng Hospital (Singapore)</td>
<td>Al Amal Psychiatric Hospital, Emirates Health Services (United Arab Emirates)</td>
<td>Myongji Hospital (Republic of Korea)</td>
<td>Gillette Children’s Specialty Healthcare (United States)</td>
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<tr>
<td>TTSH Staff Well-being Response Team</td>
<td>Staff wellbeing in mental health</td>
<td>Blue to Green – Corona Blue Support Team for the resilience of hospital workers</td>
<td>Provider-led initiatives to improve wellbeing</td>
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<td>Fundació Sanitària Mollet (Spain)</td>
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<td>Lorma Medical Center (Philippines)</td>
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<td>Improving the lives of our people through the implementation and maintenance of a health promotion management system</td>
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<td>Effective internal communications and its effect on staff productivity, retention and job satisfaction</td>
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<tr>
<td></td>
<td>Al Amal Psychiatric Hospital, Emirates Health Services (United Arab Emirates)</td>
<td>Myongji Hospital (Republic of Korea)</td>
<td>Tawam Hospital (United Arab Emirates)</td>
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<td>Staff wellbeing in mental health</td>
<td>Blue to Green – Corona Blue Support Team for the resilience of hospital workers</td>
<td>Caring for the caregivers: supporting nurse wellbeing through hospital-based programs</td>
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<td></td>
<td>Not Seen on Me Foundation (Foundation NWPM) (Poland)</td>
<td>Unidade Local de Saúde de Matosinhos, E.P.E (Portugal)</td>
<td>Unidade Local de Saúde de Matosinhos, E.P.E (Portugal)</td>
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<td></td>
<td>WySPA program, support for employees of healthcare entities</td>
<td>The work, family and personal life balance: conciliation management system and wellbeing and happiness work in ULSM</td>
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**AMERICAN COLLEGE OF HEALTHCARE EXECUTIVES EXCELLENCE AWARD FOR LEADERSHIP AND MANAGEMENT**

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<tr>
<th>GOLD WINNER</th>
<th>SILVER WINNER</th>
<th>BRONZE WINNER</th>
<th>HONOURABLE MENTION</th>
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<tr>
<td>Emirates Health Services (United Arab Emirates)</td>
<td>Emirates Health Services (United Arab Emirates)</td>
<td>Commonwealth Healthcare Corporation (Northern Mariana Islands)</td>
<td>Saudis Commission for Health Specialties - Healthcare Leadership Academy (Saudi Arabia)</td>
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<tr>
<td>Mental Health of Older Adults (MHOA) Clinical Academic Group (CAG)</td>
<td>Transformation of the AMI, advanced AV block and bariatric surgery management by digitalized clinical pathways</td>
<td>CNMI cancer and associated risks early screening project</td>
<td>HORIZONS for emerging health leaders in Saudi Arabia: an innovative national program for transforming into a world class health system</td>
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<td>Portuguese Oncology Institute of Porto (IPO Porto) (Portugal)</td>
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<td>Patient Reported Outcomes (PROs): a pathway to patient centered clinical practice</td>
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<td>Royal Hospital (Oman)</td>
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<td>Early discharge with breast drain during Covid-19</td>
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</table>
GOLD WINNER: Michael E. DeBakey VA Medical Center, Veterans Health Administration (VHA), (United States), VIONE: an innovative, simple, portable, modern medication optimization and deprescribing global methodology to improve patient safety and quality of care

SILVER WINNER: Riley Children’s Health at Indiana University Health (United States), Improving mortality from severe sepsis in pediatric patients to zero

BRONZE WINNER: King Saud Medical City (Saudi Arabia), Decrease mortality rate and intubation in preterm neonates (28-32 weeks of gestational age) by initiation of CPAP project in the delivery room

HONOURABLE MENTION:

Apollo Proton Cancer Centre (India), “Winnable Battles” - chasing the elusive dream of zero hospital acquired infections in entirety

Corniche Hospital (United Arab Emirates), Introduction of the Growth Assessment Protocol (GAP), detecting small for gestation fetuses and reduction of the stillbirth rate

 Rashid Hospital – Dubai Academic Health Corporation (United Arab Emirates), Patient Integrated Day Case Project

Emirates Hospital Services (United Arab Emirates), An AI-driven clinical program for prediction of diabetes disease burden and diabetes management in the northern emirate's population of UAE

Cascais Hospital (Portugal), FOCUS - an advanced HIV screening program

Saudi German Hospital Cairo (Egypt), Establishing an integrated quality management model (holistic approach) in Egypt

Aga Khan Hospital, Mombasa, Kenya
Ahaliya Hospitals-Abu Dhabi, United Arab Emirates
AHMC Health System, United States
Al Kuwait Hospital – Dubai, United Arab Emirates
All India Institute of Medical Sciences, India
Amang Rodriguez Memorial Medical Center, Philippines
Apollo Women’s Hospital, India
Asklepios Kliniken GmbH & Co. KGaA, Germany
Big Data Center, China Medical University Hospital, Taiwan
Bongani Regional Hospital, South Africa
Bonifatius Hospital Lingen, Germany
BUPA / Sanitas Hospitals, Spain
Burjeel Royal Hospital, United Arab Emirates
Centro Hospitual Universitário Lisboa Norte, EPE, Portugal
Cho Ray Hospital, Vietnam
City Hospital, Myanmar
Czech Rehabilitation Hospital, United Arab Emirates
Dammam Medical Complex, Saudi Arabia
Davao Doctors Hospital, Philippines
Dhadem General Hospital, Saudi Arabia
Dibba Hospital, United Arab Emirates
Dr L H Hiranjandi Hospital, India
El Nasr Specialized Hospital, Egypt
El-Ramad Hospital, Egypt
Evangelisches Krankenhaus Hubertus, Germany
First Riyadh Health Cluster, Saudi Arabia
French Medical Institute for Mothers and Children, Afghanistan
Fujairah Hospital, United Arab Emirates
Fundació Aspace Catalunya, Spain
General Directorate of Health Affairs in Riyadh, Saudi Arabia
Ghu Paris Psychiatrie & Neurosciences, France
Harapan Kita National Cardiovascular Hospital, Indonesia
Heilig Geist-Hospital, Germany, Hospital Santa Rita, Brazil
Hospital Sirio-Libanês, Brazil
Ibrahim Bin Hamad ObaidAllah Hospital, United Arab Emirates
Indraprastha Apollo Hospitals, India
Institut Claudius Regaud, France
Institut Paoli-Calmettes, France
Instituto Nacional de Emergência Médica, Portugal
Ismailia Medical Complex, Egypt
Istiklal Hospital, Jordan
Jizan Health Affairs, Saudi Arabia
Jose B. Lingad Memorial General Hospital, Philippines
Jose Pio Cruz TB Hospital, South Africa
Kalba Hospital, United Arab Emirates
Khamis Mushayt Maternity and Children Hospital, Saudi Arabia
Khurafkkan Hospital, United Arab Emirates
King Fahd Specialist Hospital, Buraydah
King Hussein Cancer Center, Jordan
King Khaled Eye Specialist Hospital, Saudi Arabia
King Khalid Hospital Alkhair, Saudi Arabia
King’s College Hospital London Dubai, United Arab Emirates
KLES Dr Prabhakar Kore Hospital & MRC, India
Klinik für MIC GmbH, Germany
M P Shah Hospital, Kenya
Matkai Medical Center, Philippines
Maternity and Children Hospital - Hail, Saudi Arabia
Medicare Orthopedics & Spine Hospital, United Arab Emirates
Medland Hospital, Zambia
Mid and South Essex NHS Foundation Trust, United Kingdom
Moorefields Eye Hospital Dubai, United Arab Emirates
Mouwasat Medical Services, Saudi Arabia
National Hospital Organization Shinshu Ueda Medical Center, Japan
NMC ProVita International Medical Center, United Arab Emirates
North Oaks Health System, United States
Onassis Cardiac Surgery Center, Greece
Prefeitura da Cidade do Rio de Janeiro, Brazil
Primaya Hospital Group, Indonesia
Qatif Health Network, Saudi Arabia
Rennes University Hospital Center, France
San Carlos Apache Healthcare Corporation, United States
Sant Joan de Déu Barcelona Children’s Hospital, Spain
Santa Casa de Misericórdia da Bahia - Hospital Santa Isabel, Brazil
SAQR Hospital, United Arab Emirates
SEHA - Sheikh Khalifa Medical City, United Arab Emirates
Sharjah Blood Transfusion & Research Center, United Arab Emirates
Sharm International Hospital, Egypt
Sheikh Shakhbout Medical City, United Arab Emirates
SJD Barcelona Children’s Hospital, Spain
Sociedade Beneficente Isrelitela Brasileira Albert Einstein - Hospital Municipal Vila Santa Catarina, Brazil
Soon Chun Hyang University Bucheon Hospital, Republic of Korea
St. Anne General Hospital, Philippines
St. Elizabeth Hospital, Philippines
St. Paul Hospital of Tuguegarao, Philippines
Stanford Children’s Health, United States
Taguig-Pateros District Hospital, Philippines
Talagong District Hospital, Philippines
The Kindoya Hospital, Sierra Leone
The Medical City Iloilo, Philippines
Umm Al Quwain Hospital, United Arab Emirates
Unidade Local de Saúde do Alto Minho, EPE, Portugal
Vicente Sotto Memorial Medical Center, Philippines

Last but not least, the International Hospital Federation would like to acknowledge the following eligible submissions, which all contributed immensely to knowledge-exchange within the healthcare community:
Cleveland Clinic Abu Dhabi

United Arab Emirates

There is more to excellent healthcare than just delivering good clinical outcomes. A truly outstanding healthcare institution must have a holistic approach to patient care, blending advanced scientific methods with human compassion and support.

This is the principle behind Cleveland Clinic Abu Dhabi’s “Patients First” philosophy. As the only quaternary center in the UAE, Cleveland Clinic Abu Dhabi addresses a range of complex and critical care requirements unique to the local population, and also serves as the country’s first multi-organ transplant center. The “Patients First” philosophy is at the heart of Cleveland Clinic Abu Dhabi’s success—the organization has a collaborative approach to healthcare, ensuring that patients get the best care possible by listening to their feedback to drive improvements.

“We put patients at the center of every interaction and treatment decision. The Patient Experience team collaborates with caregivers to incorporate patient feedback into practice and ensure a compassionate and supportive environment. We also consistently meet or exceed our safety goals and international standards,” explained Dr. Jorge Guzman, CEO of Cleveland Clinic Abu Dhabi. “

The hospital’s goal is to reach zero harm through continuous strategic systems improvement, benchmarking, and evaluation. In 2021, Cleveland Clinic Abu Dhabi exceeded numerous standard patient safety targets, including door-to-balloon time for ST-elevation myocardial infarction patients, door-to-IV thrombolysis time for stroke patients, hospital-acquired pressure injury prevalence, hand hygiene, and rates of central line-associated bloodstream infection, among others. The hospital also achieved the milestone of a year free of catheter-associated urinary tract infections, an achievement that very few hospitals in the world dealing with a complexity similar to Cleveland Clinic Abu Dhabi can claim.

Caring for the caregivers

Cleveland Clinic Abu Dhabi also recognises that promoting the well-being of its healthcare providers is crucial to ensuring quality care for patients. “Our refreshed vision is to be the best place to receive care and the best place to work in healthcare. To this end, we promote a culture of psychological safety encouraging and rewarding caregivers for speaking up and proactively identifying potential factors for harm,” he said.

To sustain its delivery of complex healthcare, Cleveland Clinic Abu Dhabi provides robust, competency-based education and professional development programs for current and future healthcare professionals. Highlights include graduate and undergraduate medical education, continuing medical education, and clinical research. In 2021, the hospital hosted 157 clinical placements, trained nine medical interns, and welcomed twenty-two new residents.

On the research front, the hospital also held three medical conferences with a collective total of over 2,000 virtual attendees in 2021. Healthcare professionals from Cleveland Clinic Abu Dhabi produced more than 600 pieces of academic work in 2021, as part of its commitment to advance healthcare in the UAE and beyond. Cleveland Clinic Abu Dhabi takes pride in supporting government initiatives, leading research studies and bringing cutting-edge clinical solutions to the region. All research studies meet the standards of good clinical practice (GCP) and comply with the rules set out by the Department of Health – Abu Dhabi.

On top of these measures, Cleveland Clinic Abu Dhabi is also committed to creating a more sustainable healthcare environment. The hospital’s Sustainability Program develops initiatives and energy conservation measures to improve energy performance and save on costs. In 2021, Cleveland Clinic Abu Dhabi initiated a Greenhouse Gas audit to account for direct and indirect emissions, resulting in an 11.1 percent reduction in its total carbon footprint. The hospital also initiated a project to revert reclaimed water to irrigation tanks for outdoors. Installed water meters received more than 36,000 liters per day of rejected water, reducing the amount of potable water used for irrigation and water features by 30 percent.

As a result of these efforts, Cleveland Clinic Abu Dhabi successfully recorded many prestigious accolades and medical firsts for the country, including becoming the youngest hospital to receive Magnet® accreditation from the American Nurses Credentialing Center, the global standard in nursing quality. The hospital also bears the distinction of being the first hospital outside of the U.S. to be named an Antimicrobial Stewardship Center of Excellence by the Infectious Diseases Society of America (IDSA). Cleveland Clinic Abu Dhabi was recently named the UAE’s top hospital in NewsWeek’s World top Hospitals 2022 listing, and won the 5 Diamonds rating for “Muashir” the UAE’s healthcare quality index.
As Korea’s first Western-style medical institution, Severance Hospital has a long and proud history of providing state-of-the-art care to its patients across the country. Established in 1885, Severance Hospital played a large role in the development of modern medicine in Korea, and it continues to be a pioneer of new treatments and methods of providing healthcare.

Severance Hospital was the first Korean healthcare institution to receive accreditation from the Joint Commission International (JCI). It has since been re-certified by the JCI five times in a row, a testament to the high quality of care that the hospital provides. For 11 consecutive years, Severance Hospital also ranked first in Korea’s National Customer Satisfaction Index (NCSI), and in 2021, it also ranked first in all surveyed companies and institutions.

To maintain its position as Korea’s leading healthcare institution, Severance Hospital has rolled out several initiatives to improve healthcare delivery, patient experience, and staff wellbeing. For instance, it is the first hospital in Korea to establish a medical evaluation committee, which was inaugurated in 1981. It was also the first to establish a dedicated Division of Quality Improvement, which was transformed into the Innovation Center in 2019. Through this department, Severance Hospital was able to establish a professional healthcare quality management system, which has been internationally recognized through its various accreditations.

Apart from providing groundbreaking healthcare solutions, Severance Hospital is also committed to ensuring a seamless healthcare experience for its patients. The hospital has recently established the Office of Patient Experience, which studied and addressed any issues which may impact a patient’s healthcare journey. To improve patient access, the hospital has introduced the My Severance application, which offers a range of services, from setting medical appointments to settling insurance claims. Patients can also access a copy of their medical records through the hospital’s website and mobile.

Conscious of its outsized role in the country's healthcare system, Severance Hospital also strives to fulfill its social responsibilities. In 2021, when the number of confirmed Covid-19 cases in Korea increased, Severance Hospital operated a residential treatment center to cooperate with the government guidelines to treat 3,200 patients and provided vaccinations to about 15,000 people, including essential social workers.

In terms of staff well-being, Severance Hospital established the Division of Human Resources Development and Management for person-centered management in 2021. In addition, the hospital is conducting a pilot project to enhance the nurse shift system in inpatient wards to improve working conditions for nurses and a newly established reward system that is also in operation for medical staff who achieve outstanding results.

At present, Severance Hospital operates Asia’s largest robotic surgery education center. It adopted the DaVinci surgical system as early as 2005, and has since become the world’s first healthcare institution to have performed over 30,000 robotic-assisted surgeries. Severance Hospital’s Robot & Minimally Invasive Surgery Center, established in 2008 for the first time in Korea, is leading the field of robotic surgery by training 2,169 medical staff from 38 countries. The hospital is also a leader in innovative cancer treatments. It will open the Yonsei Heavy Ion Therapy Center in 2022. The center will offer heavy ion therapy, a novel cancer treatment that is only offered in about ten institutions across the world.

Moving forward, Severance Hospital's vision is to remain as a hospital that people trust and visit because of its superior medical service in treating intractable diseases and leading high-level surgery. It also seeks to be a data-based hospital, or one that makes rational decisions based on data in clinical and management fields. Lastly, the institution aims to be a proud hospital: A hospital where both patients and employees are cared for and respected.
Many healthcare institutions across the globe grapple with increased healthcare needs associated with an ageing population and also a rapidly shrinking workforce. Amidst these challenges, digital solutions are crucial to ensure the delivery of quality care to patients. Faced with these issues, Tan Tock Seng Hospital, the flagship hospital of Singapore’s National Healthcare Group, has adopted the Hospital Without Walls digital transformation strategy.

Hospital Without Walls seeks to provide care beyond boundaries, and to deliver healthcare solutions anytime, anywhere. Digitalisation is a key enabler for Tan Tock Seng Hospital to reimagine and redesign care with our patients and partners. For instance, the hospital's Community Health Teams (CHT) utilise Tan Tock Seng Hospital’s Healthcare Intelligence (HI) system to create a targeted approach in care delivery. Using HI, the hospital is able to identify patients at risk of being re-admitted. CHT members receive automated patient discharge triggers from the HI system, which allows the care team to provide timely interventions via telephone calls or video-consultations. By providing more care modalities and seamless information flow, 55% of Frequent Admitters experienced reduced readmissions and were able to receive timelier care delivery in 2019.

This digitisation strategy supports population health by allowing Tan Tock Seng Hospital to establish a Population Health Registry (PHR) with other National Healthcare Group institutions. Through this registry, Tan Tock Seng Hospital and its partners have been able to obtain data-driven insights about patients across different demographics. This, in turn, can lead to the development of appropriate interventions for different population segments.

Digitisation has allowed Tan Tock Seng Hospital to forge closer partnerships with primary healthcare providers. The HI system has been introduced to hospital's community partners, allowing providers to ensure that patients adhere to their post-discharge care plans which we call Central Health Linkup. With timely information made available, healthcare staff from various institutions can collaborate closely to align care plans and ensure continuity of care for the patient across care settings. Central Health LinkUp has since been introduced to around 20 of our community partners.

Tan Tock Seng Hospital’s digitalisation strategy is grounded on population health, and is made possible through close collaboration with residents, caregivers and community providers. Moving forward, this strategy will continue to revolutionise Tan Tock Seng Hospital’s care delivery model to a relationship-based, joined-up care supported by a network of providers.
Al Qassimi Hospital
United Arab Emirates

As the largest healthcare institution in the United Arab Emirates, Al Qassimi Hospital has always been at the forefront of providing innovative care to its patients. A culture of excellence is at the heart of Al Qassimi Hospital’s service, and it has built its reputation on providing peerless care to its patients in the Gulf region and beyond.

To ensure consistency in the quality of care, Al Qassimi Hospital rolled out various initiatives to promote quality on an institutional level. With the help of the Emirates Health Service, the hospital established an internationally-recognized quality, therapeutic, and health safety system, which ensured the delivery of administrative services with efficiency and transparency. This system provided measurable improvements to patient experience. For instance, the turnaround time for Covid-19 test samples was reduced to less than eight hours; elsewhere, the hospital was able to significantly reduce the incidence of pressure injury among patients.

The hospital also strove to enhance the culture of innovation and creativity within its ranks, with the use of various technologies and cutting-edge treatments. For instance, Al Qassimi Hospital pioneered a Robotic Outpatient Pharmacy, which is a state-of-the-art medication management and drug dispensing tool that greatly reduced patient waiting time. The hospital also introduced the country’s first Cardiac Device Clinic - Drive Thru, which provided care and support for cardiac patients with heart regulators while inside their vehicles. Al Qassimi Hospital also boosted the capabilities of its E-clinic and online consultation systems, drawing over 100,000 patients just in its first year of operation. It is also the first health facility in the Middle East to use the “Dynamics” Arterial Bio-matching System, which is the first implantation stent to supply medicine in the world in line with the physiology of the arteries.

Improving health equity and achieving clinical outcomes are also strategic priorities at the hospital. To this end, several programs were conducted, including educational drives about common conditions such as heart muscle failure and asthma. The hospital also sought to provide assistance to patients with cardiovascular diseases, and ensured equal treatment for all, even for those with a reduced ability to pay.

As a result of these initiatives, Al Qassimi Hospital has been awarded numerous international awards for its excellence in health care, including JCI accreditation for healthcare in 2018 and 2022. It has also received various accreditations from the CCPC, particularly for its Acute Myocardial Infarction Program, Bariatric Surgery Program, and Advanced AV Block Program.

King Faisal Medical Complex, Taif
Saudi Arabia

Gone are the days when patients were merely passive participants in the healthcare system. Person-centered care has become the new standard of good healthcare—the perspective of patients should be prioritised, and patients should be treated as partners who can collaborate closely with their healthcare providers.

Providing person-centered care is at the core of King Faisal Medical Complex’s (KFMC) healthcare philosophy. As the largest hospital in Taif, Saudi Arabia, KFMC uses a person-centered care model to provide the best service possible to its patients, and at the same time provide a positive and encouraging environment for its caregivers and employees.

In line with its goal of providing the best care possible to the population of Taif, KFMC embarked on an ambitious project to be the first hospital in Saudi Arabia to obtain a Planetree certification. Planetree is a global non-profit that helps healthcare institutions establish a person-centered model. To ensure that its services conform with the person-centered care model, KFMC tapped a multidisciplinary team to undergo training and implement changes in its operations. KFMC also focused on improving staff engagement and learning. Numerous workshops were done with healthcare providers to ensure that caregivers understand the tenets of compassionate care.

The hospital also established other initiatives such as preference-sensitive care practices, which honors patients’ choices with meals, appointments, and even visitation hours. KFMC also established a multidisciplinary approach to end of life care which addresses and respects the end-of-life wishes of a patient and their family.

As a result of these efforts, KFMC became the first Person-Centered Gold Certified Ministry hospital in the Kingdom of Saudi Arabia. Noting the positive outcomes of this healthcare transformation, the Ministry of Health has now started to apply the person-centered care standards all over the Kingdom, KFMC became the reference hospital in designing, piloting and implementing the new national standards for person-centered care.
Apollo Hospitals, Chennai
India

Apollo Hospitals is widely regarded as the pioneer of private healthcare in India, democratizing healthcare and allowing Indians from all walks of life to access world-class facilities at a fraction of global prices. Apollo Hospitals Chennai is the group's first and flagship facility, with over 550 beds with more than 40 clinical specialties.

Superior nursing care is one of the foundations of Apollo Hospitals’ excellent service. Nurses across the whole hospital system are provided in-depth and standardised training to promote the best clinical outcomes for patients. Nurses and allied healthcare professionals are trained to provide compassionate care to patients, alleviating the stress and fear that is inevitably brought about by hospitalisation. The Apollo Hospitals group also has a robust infection control programme to minimize the incidence of hospital-acquired infections.

Apart from caring for its patients, Apollo Hospitals also promotes the well-being and resilience of its healthcare professionals. To promote staff well-being, Apollo conducts organizational Hospital safety culture surveys annually, allowing its human resources professionals to roll out strategies geared at enhancing motivation and training.

Apollo Hospitals is also committed to fulfilling its social responsibilities: it provides inclusive healthcare to patients at the fringes of society, especially in far-flung rural areas. As a result of these initiatives, Apollo Hospitals has the distinction of being among India's most respected companies, and has consistently been recognised by both local and international award-giving bodies.

Apollo Proton Cancer Centre
India

Apollo Proton Cancer Centre was born out of the determination to completely transform the field of oncology in India. The facility bears the distinction of being the first proton therapy centre in South Asia and Middle East, offering cutting-edge cancer treatment to countless patients across the region.

The hospital’s approach to cancer care is best defined by its unique Cancer Management teams. Each team has site-specific specialists who undertake diverse disciplines like surgery, radiation and medical oncology. Patients are provided with a personalised treatment approach which is evidence-based and comprehensive, keeping in mind the various needs of the patient. Each team is further fortified by trained nurses, dieticians, therapists and clinical trial coordinators. Through this multidisciplinary approach, patients have access to a diverse team of cancer experts instead of relying on a single opinion.

Apollo Proton Cancer Care provides everything from preventive to palliative care for cancer patients. Its nurses are trained to provide warm and compassionate care for all patients, and the hospital constantly prioritises patient experience by improving its processes. Feedback and suggestions are collected daily on various parameters and even post discharge feedback is taken into consideration, to correct processes and improve patient experience. The hospital also uses various technology interventions to improve efficiency and reduce costs, such as by digitalising medical records and using automated systems for routine tasks.

Apollo Proton Cancer Centre has received various accolades for its pioneering work in cancer treatment. Among its many distinctions are awards from prestigious bodies such as the IBA Belgium, the Association of Healthcare Providers, India, and the Indian Green Building Council, among others.
AZ Maria Middelares
Belgium

It can be difficult to stand out in an advanced healthcare system where many hospitals provide a high quality of service. In Belgium, which is home to one of the world’s best healthcare systems, hospitals strive to provide an exceptional patient experience in order to excel in a highly competitive and challenging healthcare environment.

AZ Maria Middelares, a leading medium-sized Belgian general hospital, has always prioritised providing excellent service to its patients. As one of the few Belgian hospitals accredited by the Joint Commission International (JCI), AZ Maria Middelares not only has outstanding facilities and services, but also boasts one of the highest patient experience scores in the region. In 2021, despite challenges and constraints brought about by the pandemic, the hospital’s Net Promoter Score (NPS) increased from 68.4% in 2017 to an all-time high of 75%, based on 8,565 patient questionnaires. The NPS is a key metric that measures how an organization and its services are perceived by patients.

Annually, AZ Maria Middelares also participates in a Belgian/Flemish patient experience benchmark by the Flemish Institute for Quality of Care (VIKZ) in which different aspects of patient experience. In 2021, the hospital ranked above the mean for 26 out of 28 variables measured by the VIKZ, and exceeded the ambition level in 5 out of the 28 factors assessed by the survey.

AZ Maria Middelares also offers above-average clinical outcomes for its patients, and provides a healthy workplace for its staff. For instance, its Hospital Standardized Mortality Ratio was below 1 for the period of 2019-2020, which means that the standardised mortality rate is lower than expected. It also ensures that its personnel have work-life balance: 50% of the staff are granted flexible working arrangements, and the hospital’s overall sick leave rate (an indirect indicator of workforce wellbeing) is significantly lower than the national average.

Dubai Hospital - Dubai Academic Health Corporation
United Arab Emirates

Since its establishment in 1983, the Dubai Hospital has served as a hub for excellence and a pioneer of quality care in the United Arab Emirates and the wider Gulf region. In line with its vision of creating a healthier and happier community, Dubai Hospital has launched various initiatives to continually improve the quality of its services. These initiatives seek to provide easier access to services and provide a smoother and more efficient patient experience.

For instance, as part of its efforts to improve health service quality, Dubai Hospital has rolled out its out-patient department (OPD) optimisation project, where it was able to significantly reduce the waiting times for securing doctor appointments. It also established a rapid system in its chemo-hema infusion center, where patients are able to secure chemotherapy treatment within three hours from arrival, and non-chemotherapy treatment within two hours from arrival. It also established the Fetal-Echo Clinic, which is Dubai’s first joint obstetric-pediatric cardiology clinic. To improve clinical outcomes, Dubai Hospital has also launched an automated process to determine mortality and morbidity risks. This automated process reduced any bias in reporting, and resulted in improved preparedness and more timely clinical interventions. These are only some of the many efforts pursued by the hospital in line with its goal of continually providing value-based and high quality service. As a result of these efforts, Dubai Hospital received its first accreditation from the Joint Commission International (JCI) in 2007, which was followed by four consecutive accreditations. Its services have also been recognised by other international bodies, such as the International Customer Experience Standard, the International Diabetes Foundation, the College of American Pathologists, and the Arab Board of Health Specializations, among many others.
Large healthcare institutions often have a significant ecological footprint. Providing care to thousands of patients can be extremely resource-intensive and sustainability might not be a core priority in most hospital settings.

At the Geneva University Hospital (HUG), the Hospital Executive Board quickly identified the need to develop and implement sustainable actions to address this priority. Over the years, the hospital had pioneered various efforts to improve sustainability in its operations and processes, fully aware of the environmental impacts of the healthcare sector. Although these efforts were numerous and innovative, there were mostly developed in an isolated and uncoordinated approach.

The HUG decided to create an institutional strategy to promote sustainability across the entire range of the hospital’s operations. “The ultimate goal is to shape a sustainable hospital with the underlying objectives to reduce climate and environmental impact while improving its contribution to the community and staff,” said Bertrand Levrat, Chief Operating Officer of the HUG. “As the CEO of the largest university hospital in Switzerland, I feel responsible for implementing sustainable practices as they improve the lives of the patients who come to the HUG and the lives of those who care for them.”

An institutional effort
The HUG spanned the entirety of its operations to minimize the hospital’s carbon footprint. For instance, 100% of the hospital’s electricity has been derived from renewable sources for more than 10 years, while over half of its vehicle fleet is now electrical. Almost half of the hospital’s waste is entirely recycled, and in 2021, the HUG became the first hospital in Switzerland to implement a chemical-free floor cleaning technique.

When it comes to serving meals, 90% of the fresh vegetables included in the 3.4 million meals prepared each year are from Switzerland and 40% are sourced from within the Geneva area. Main ingredients such as potatoes, yoghurt, plain flour, beef, pork and veal, all originate from Switzerland, while a quarter of the main course served to patients and staff is vegetarian.

Even the HUG’s employees contribute to this institutional endeavour as half of them are eco-commuters. In May 2022, the hospital joined the Bike-to-Work challenge with 800 employees participating in and cumulatively cycled more than four times the earth’s circumference, saving 25 tons of CO2 in one month.

Delivering a sustainability strategy
This massive endeavour required collecting inputs across all levels of the hospital operations and more widely across Geneva. To build its strategy, the HUG launched a participative consultation involving all its stakeholders. In total, 522 people actively involved themselves in this participative process. Their contributions generated 7’461 votes, 158 comments and 152 tangible propositions, which all strengthened the hospital sustainability strategy and action plan.

“A hospital can be a very complex environment and the expertise of its staff is extremely valuable to identify the most effective actions,” Mr Levrat said. “The idea was to engage them in the creation and development process and empower them while increasing their awareness of these issues,” he added.

This collaborative process behind the HUG’s pioneering strategy could be easily replicated in other hospitals. Joining forces with other institutions is key to having a profound impact on the transition to a more sustainable health system. The HUG co-launched with another Swiss hospital in 2021, a sustainability working group which includes the five Swiss university hospitals in order to share experiences and knowledge as well as to discuss objectives. The HUG also aims to expand this partnership to all regional hospitals, even those beyond national borders.

The HUG is a leading national and international academic institution, bringing together ten public hospital sites. It is the most important university hospital in Switzerland as it provides care to over half a million people. It is also the largest employer in the Geneva region.
Cardioinfantil Foundation | LaCardio | Colombia

Give a life

Congenital heart disease (CHD) is one of the leading causes of infant mortality. In Colombia, more than 5,000 children are born each year with heart conditions, but many regions lack hospitals or clinics that can diagnose and provide comprehensive treatment for these young patients. As a result, numerous children with CHD fail to get adequate and early care, leading to significant disabilities and setbacks later in life.

About 50% of children born with CHD require surgical management during the first year of life. This means that over 2,500 children in Colombia alone require surgical treatments for CHD annually, but due to socioeconomic aspects, many have no access to doctors and facilities. As a result of the inequity in health access, the Cardioinfantil Foundation was created in 1973 in order to provide surgical management to low-income pediatric patients with CHD.

Cardioinfantil Foundation’s “Give a life” program tackles this issue by funding a multidisciplinary team of pediatric doctors, cardiologists, nurses, social workers and other relevant professionals to lead health brigades in underserved areas. This exceptional and selfless team of medical professionals travels throughout the country to diagnose children in areas with inadequate care. Once children are diagnosed, they are transferred to Bogotá for treatment, with Cardioinfantil Foundation providing round-trip air for every child and its guardian.

As soon as the patient arrives at Cardioinfantil Foundation’s facility, lab tests and pre-surgical studies are conducted and reviewed by an integrative medical team to ensure that the patient receives the best quality of care possible. The program covers all costs associated with the patient’s treatment, including food and lodging for patients and their families. Once the surgery has been completed and the patient is ready to return home, Cardioinfantil Foundation’s team works with the parents to ensure they understand and are able to oversee the recovery of their child’s health. The child then returns home with a stronger heart, a better quality of life, and a real future. Every other year, the medical team also visits their previous patients as part of the brigades to perform checkups.

The Cardioinfantil Foundation has received different recognitions for its achievements, nationally and internationally, in different categories. Among these accolades is an accreditation by the Joint Commission International; recognition by the Revista América Economía; and awards from the International Hospital Federation. Since 2016, Cardioinfantil Foundation has also been recognised as a teaching hospital by the Colombian Ministries of Health and Education.

Apollo Children’s Hospitals, Chennai | India

Save a Child’s Heart initiative

Congenital heart disease causes a staggering 10% of all infant mortality in India alone. Many of these deaths are preventable—studies show that while the majority of children with congenital heart disease require treatment in their first year of life, less than 5% of children receive adequate medical attention.

In response to this problem, the Apollo Children’s Hospitals Chennai launched the Save A Child’s Heart Initiative (Sachi). Through this project, the institution offers world-class and highly specialized care to underprivileged children suffering from heart diseases. Early detection is crucial in treating children with congenital heart diseases. Tragically, many parents from low-income backgrounds lack the knowledge and resources and fail to realize that their children may be suffering from a congenital heart condition. Under Sachi, a team of doctors and paramedics travels to camps across India to conduct cardiac screening for children of all ages. When an underprivileged child is diagnosed with a congenital heart condition, the Apollo Hospitals team then provides financial support to help the child and their parents travel to Chennai for treatment. The parents and their children are offered free transport, food, and accommodation during the entire stay of the treatment. Once patients are discharged, they continue to undergo regular screening to ensure their full recovery. To date, Sachi has screened nearly 9500 children and treated nearly 150 children with heart disease, just in the past two years.

Sachi also seeks to raise awareness about congenital heart disease. Sachi conducts camps in various cities across the country, in cooperation with non-government organisations, rotary clubs, and government bodies, among many other partners. It also spreads awareness about congenital heart disease through advertisements, flyers, and banners, all of which are produced in the vernacular language to ensure that it is fully comprehended by the public. To date, Apollo Children’s Hospital’s Chennai has conducted ten mega camps all over India, including cities such as Shillong, Megalaya, Guwahati, Agarthala, Bhubaneswar, and Andaman.
Apollo Proton Cancer Centre

India

“Can-cer Vive”: cancer survivorship follow up care in the community

Many cancer survivors experience a reduced quality of life after undergoing treatment. Cancer survivors face various health issues even after successful treatment, such as fatigue, pain, weight gain, depression and anxiety. Providing support to patients and their families is crucial to improve the quality of life of cancer survivors, but many lack access to support groups and have few opportunities for follow-up care.

In order to improve the quality of life of cancer survivors the Apollo Proton Cancer Centre launched its “I Can-cer Vive” project. This initiative provides a support system for cancer survivors, helping them become more emotionally and improving their quality of life in the process. This support group brings together a group of like-minded people, and provides them with cancer-related education, emotional, and social support. Group members are able to share and listen to various stories of success and survivorship. They also provide each other with first-hand tips on what to expect during treatment. The group also provides crucial emotional and physical support for patients’ families and caregivers.

The group support is guided by a dedicated team of health professionals. The survivorship clinical team consists of a Medical Director who is neuro-oncologist for adult patients, a pediatric oncologist for the pediatric survivors, an oncology-trained nurse, care coordinators and guest relation staff. The survivorship team also includes a nutritionist, social workers, psychologists, as well as quality & digital marketing staff. Apart from on-site meetups, the hospital has expanded its reach to include digital interventions, as these allows the team to provide support and education to large numbers of people.

Democrito O. Plaza Memorial Hospital

Philippines

Freeing the Unfree: community-based active case finding interventions for tuberculosis among persons deprived of liberty in Agusan del Sur

Persons deprived of liberty often present ideal conditions for the development and spread of Tuberculosis. Studies have shown the TB prevalence among prisoners to be many times higher than that of the surrounding civilian communities, since prisoners are often housed in overcrowded cells, have limited nutrition options, and have poor access to healthcare.

Despite the importance of targeting high-risk populations, prisoners are not sufficiently prioritized in major policy documents. Knowing that tuberculosis elimination can only be achieved if all populations and chains of transmission are sufficiently addressed, the Democrito O. Plaza Memorial Hospital sought to improve the detection and treatment of tuberculosis cases among persons deprived of liberty through its Freeing the Unfree initiative.

The program was implemented in the Agusan del Sur Provincial correctional facility. A series of lectures was conducted to provide basic knowledge on tuberculosis, including its symptoms and methods of prevention. Systematic screening with chest radiographs of inmates at three distinct time points during their stay in prison was then conducted. Chest radiographs were conducted as inmates entered prison and before they were released; mass screening of inmates already inside the correctional facility was also conducted. All inmates who had suspicious chest radiographs for tuberculosis were asked to submit sputum specimens for testing, and bacteriologically confirmed and clinically diagnosed tuberculosis patients underwent treatment.

The project was not limited to eradicating tuberculosis among incarcerated persons. Family members of incarcerated patients with known close contact were also tested, and those who tested negative were likewise enrolled in a preventive treatment program to address potential latent tuberculosis. Since it was first implemented, the program has improved the early detection and treatment of tuberculosis not only among prisoners but also across the wider community in the province.
Emirates Health Services

EHS integrated services and telehealth program: towards a greener, accessible, more sustainable healthcare model

Maximising the use of electronic medical records (EMR) and other digital healthcare solutions is crucial in creating a more sustainable and accessible healthcare model. To this end, the Emirates Health Service (EHS) has launched Wareed, a streamlined and accessible EMR system that connects various health facilities and government entities across the UAE.

This initiative was launched to create an efficient, sustainable, paperless solution by automating, innovating, and transforming the process of documenting and sharing medical data between EHS and other Government entities. In particular, the project sought to address the lack of coordination between various government screening programs, including the pre-employment, pre-marital, pre-university, and national reserve screening programs. Each of these programs require collaboration between EHS Primary Care Services and one of the four government organizations—the Federal Authority for Government Human Resources, the Ministry of Education, the Ministry of Justice, and the Ministry of Defence.

By automating these separate screening process and integrating them into the Wareed EMR system, the EHS was able to reduce the number of required physician consultations and drastically reduce paper consumption. The EHS was also able to reduce the average waiting time before patients could receive their reports, and increased the accuracy of data flow between EHS and other government entities. This system presents an innovative model of healthcare delivery, and shows that healthcare services can be made more sustainable through the use of smart and innovative technology.

Mariano Marcos Memorial Hospital and Medical Center

Beyond screening: increasing the G6PD return rate in the province of Ilocos Norte

Routine health screening is crucial to ensure the health and safety of newborns. A simple test could determine an infant’s susceptibility to dozens of heritable and metabolic disorders. Unfortunately, such screening tests are unavailable to many newborns, particularly those born to underprivileged families.

In the Philippines, Glucose-6-Phosphate Dehydrogenase (G6PD) deficiency is one of the most common disorders found among newborns. Despite this, studies show that there is a significantly low return rate of newborns needing confirmatory tests for G6PD. This prompted the Mariano Marcos Memorial Hospital to launch the G6PD Confirmatory Caravan project, which seeks to increase the compliance of G6PD screened babies.

Through this initiative, the hospital helped raise funds to cover the confirmatory G6PD screening of infants born to indigent families. The test was performed at the hospital’s G6PD Confirmatory Center, where pediatric medical specialists and clinical nutritionist were also present in order to provide health education and counselling to parents regarding diet restrictions and special care considerations for children found positive for G6PD. As a result of the caravan, the total annual cumulative G6PD Return Rate for 2021 rose to 76%, compared with just 31% in the previous year.

The caravan was conducted in collaboration with the national and local government, other newborn screening centers, provincial health offices, and non-government organisations. G6PD Confirmatory Caravan is also part of the hospital’s goal of improving access to newborn screening in the province and beyond.
Few hospitals take an active role in addressing the social determinants of health that impact the community they serve. Studies show that the conditions in which people live and work play an outsized role in determining their health outcomes. Despite this, health initiatives are largely reactive in nature, and there are few projects in place to proactively address and improve the social determinants of health for people in marginalised communities.

This is the gap that the Parkridge Health System sought to address when it launched the Orchard Knob Collaborative (OKC). Orchard Knob is a historic community located in Tennessee, USA, but its residents face many health challenges due to deep economic and social inequities. Hence, the management of Parkridge Health System collaborated with the Orchard Knob Neighborhood Association and other relevant community organizations community leaders to launch a three-phased program aimed at addressing the health disparities faced by this historic community.

The first phase addresses the community’s physical infrastructure, including improving the quality and safety of homes and community landscapes, and reducing risks associated with unhealthy and unsafe living conditions. The second phase aims to improve social infrastructure, including providing access to available resources, and alleviating social need stressors, such as food insecurity, safety, and affordability, among others. The third phase promotes healthy living, involving strategic community development and providing sustainable solutions for current and future residents.

As a result of its unique commitment to the community, Parkridge Health System has attracted the attention of local and federal media, and has received generous pledges of support from various organisations. The project has also received grants from the local and federal government.

Many patients face barriers to receiving life-saving angioplasty. The biggest hurdle faced by patients is often the fact that not all healthcare institutions are capable of providing this procedure. Coordination between various healthcare providers is key to prevent long waiting times for this time-sensitive procedure.

As a premier cardiac treatment facility, Prince Sultan Cardiac Center saw the need to establish an angioplasty network in Saudi Arabia’s Qassim region. Among more than 16 healthcare facilities in the area, only one centre had a cardiac catheterisation laboratory. Only those patients who presented to the percutaneous coronary intervention (PCI)-capable facility were able to receive primary angioplasty at the right time, while those who relied on other facilities either received thrombolytic therapy or had to be transferred to PCI-capable facilities.

To improve these outcomes, the hospital collaborated with all healthcare facilities in the Qassim region. The hospital prepared a standard policy and trained more than 1,500 healthcare workers from various institutions, with the goal of providing timely and adequate treatment to patients. The project tremendously increased the chance for patients with ST-elevation myocardial infarction (STEMI) who approach a non-PCI capable facility to have primary angioplasty instead of thrombolytic therapy. The rate of primary angioplasty for patients in the Qassim region increased from 57% to 98%. Since the start of this service, more than 1250 patients were transferred for primary angioplasty as the proper management at the right time, which resulted in significantly reduced mortality, morbidity, hospital length of stay, and rehospitalization.
Cancer hospital stockpiles: strategizing for an efficient and sufficient inventory list of essential items for setups serving in low-income countries

Mathematical healthcare models rarely capture the challenges faced by many hospitals in low-income countries. After the first wave of the pandemic, various international organisations released guidelines to help hospitals cope with supply shortages during times of crisis. While these guidelines were helpful for many institutions, they were of little use for most hospitals in low or low-middle-income countries.

Seeing the need to address this crucial gap, researchers at the Shaukat Khanum Memorial Trust set out to create their own model to help hospitals in low-income countries be more prepared for future pandemics.

“We aimed to develop a framework to establish a list of essential medical equipment, drugs, and other materials that should be stockpiled for subsequent waves of the COVID-19 pandemic, or other ‘flu-like’ pandemics, by a tertiary care cancer hospital in a low or low-middle-income country. Furthermore, various strategies to help hospitals with the logistics of stockpiling were strategized,” said Dr. Khawaja Shehryar Nasir, Consultant at the Shaukat Khanum Memorial Cancer Hospital & Research Centre.

A unique mathematical approach

“Our model uses the unique consumption patterns of a single cancer institution in a low or low-middle-income country, unlike prior models designed for community hospitals in high-income countries,” Dr. Nasir explained, adding that such countries often have a centralised healthcare network with pooled purchasing, where strategic decisions concerning stockpiling may be made at a government level. The same is not true for many hospitals in low-income countries, where purchasing decisions must often be made on an institutional basis.

The project first focused on a stockpiling strategy for supplies of personal protective equipment, medication, oxygen, and reagents/supplies for laboratory and radiological investigations. These items were tagged as essential goods to stockpile in times of crisis.

To establish the quantity of essential items to stockpile, researchers reviewed and compared consumption data for June 2020, the peak month of the first wave of the pandemic, versus consumption data during a controlled pre-COVID timeframe (June 2019). They then determined the calculated daily use (CDU) of each of the items. A margin of 20% was then added to this number to account for the pandemic’s unpredictable nature and procurement delays. This is known as anticipated daily use (ADU). The ADU was then multiplied by the lead-time to calculate the quantity of the item needed for the stockpile. A costing analysis was also performed to determine the cost difference between procuring items as needed or purchasing pre-pandemic. If a difference of ≥5% was present, an additional analysis of the cost of maintaining, rotating, and storing the stockpiles was conducted.

Through this process, the hospital was able to determine whether a particular item should be stockpiled, allowing it to be more prepared for the next waves of the pandemic. “During the initial waves of COVID-19, our hospital, like other hospitals worldwide, encountered situations where the PPE reserves were nearly exhausted because of increased usage and delays in the procurement process and the price of available items skyrocketed. Hereafter, in the corresponding waves, through the help of this project, we did not encounter a shortage of any essential items. The project allowed the hospital to provide an uninterrupted supply of essential materials, including oxygen, during the subsequent waves of COVID-19,” Dr. Nasir noted.

Due to its proven usefulness, the model was subsequently integrated into the hospital’s Materials and Management Department practice.

This model is adjustable and can be modified and used under individual, institutional requirements. The model can also be expanded to incorporate estimating stockpiles for other essential medical equipment, such as syringes, catheters, dressing materials, bedding, waste management supplies, body bags and shrouds needed for the handling of dead bodies. Similarly, it can also be used for calculating necessary stockpiles for food, water, and fuel reserves.

Shaukat Khanum Memorial Trust is a not-for-profit organisation that provides state-of-the-art cancer care to patients through modern therapies, irrespective of their ability to pay. Last year, the organisation provided care to more than 200,000 patients in an outpatient-setting, 63,000 chemotherapy sessions were delivered, and more than 77,000 radiation-therapy sessions occurred.
Manila Doctors Hospital and Circle of Partners  Philippines

REDI (Responsive and Efficient Disaster Intervention) health intervention to rehabilitation: an inclusive and ecologically responsible disaster response program

The Philippines is among the world’s most vulnerable countries when it comes to natural disasters. Destructive typhoons, earthquakes, and floods impact the lives of millions of Filipinos each year, and these disasters only add further strain to an already struggling healthcare system. Healthcare infrastructure are frequently damaged by these calamities, leaving many locals without access to adequate care when they need it most.

This is the problem that the Manila Doctors Hospital (MDH) and its Circle of Partners sought to address when it launched REDI (Responsive and Efficient Disaster Intervention), a multi-dimensional health crisis response program that aims to transform healthcare delivery in times of crisis.

REDI utilizes a multi-sectoral and needs-based approach to ensure that health services remain accessible during times of crisis. MDH’s team of volunteers stand ready to provide healthcare services and basic necessities to victims of natural calamities. MDH’s volunteers also provide medicines and medicinal supplies to local responders. REDI also goes beyond caring for the physical health of those impacted by disasters. It also provides mental health services for patients, and takes into account the needs of persons with disabilities (PWDs) and cultural minorities.

Apart from immediate crisis response, REDI also supports the rehabilitation of disaster-hit areas. These efforts include rebuilding health and education facilities, and providing skills enhancement training for local responders and healthcare providers. These skills enhancement workshops include training in subjects such as basic Filipino sign language, Disaster Risk Management, and Basic Life Support, which helps better equip participants in planning localized solutions for crisis preparedness and response.

REDI also puts a strong emphasis on the development of solutions to help mitigate the impact of climate change. Crisis response solutions rarely take ecological concerns into account; in contrast, ecological responsibility is prioritised in REDI’s disaster response system. In recent years, REDI and its partners have shifted to ecologically responsible products—for instance, it uses DuPont and Oeko-Tex certified reusable face masks and hospital linens, uses water filtration buckets instead of single-use plastic bottles, provides rechargeable solar-powered lamps, and utilizes recyclable construction materials.

Philippine Children’s Medical Center - Pediatric Blood Center (PedBC)

Philippines

The Pediatric Blood Center rises in the midst of crisis: blood bank donation innovations during the Covid pandemic

The harsh and prolonged Covid-19 lockdown in the Philippines severely reduced the amount of blood donations given to blood banks across the country. The decrease in blood donations posed a particular risk for pediatric patients with cancer and blood disorders, who faced life-threatening risks unless provided with regular transfusions.

Healthcare workers at the Philippine Children’s Medical Center (PCMC) needed to act fast to avert a disastrous situation where pediatric patients will have inadequate blood supply. To do this, PCMC immediately established a crisis management within the laboratory to which the Pediatric Blood Center (PBC) was attached. Specific to blood transfusions, a Covid response team was created together with other stakeholders — such as the Red Cross, Department of Health (DOH), other blood service facilities—to strengthen networking and ensure adequate blood supply during the pandemic.

PCMC likewise implemented various initiatives to promote blood donation during the pandemic. For instance, it launched the “Blood bridges Love” campaign, which encouraged hospital employees and their families to donate blood. To ensure safety of donors, transportation to and from their homes was provided at the start of the pandemic, and authorization passes to security checkpoints were issued to donors. The mobile blood team was subjected to regular RT PCR testing before travel to help allay fears among donors.

On a structural level, the donation area of PBC was moved to a well-ventilated space between the main laboratory and blood bank, which allowed for physical distancing. Environmental infection controls were reinforced, while single-use disposable bedsheets were provided for every donor. Moreover, the hospital launched major communications campaigns to promote blood donations, and videos and infographics about donation safety during pandemic were shown on social media.

As a result of these efforts, PCMC was able to maintain an adequate supply of blood for its patients even at the height of the pandemic. Furthermore, the hospital was able to sustain its ISO Integrated Management System Certification for 2021 and achieve the ISO 9001:2015 and ISO 14001:2015 standards, another milestone despite the circumstances.
Apollo Hospitals, Chennai

India

Innovation in infection control: a recipe for success

Health care–associated infections (HAIs) pose a substantial risk for patient safety. HAIs are associated with prolonged hospital stays and cause long-term morbidity, and produces increased antimicrobial resistance in pathogenic bacteria. Lowering the incidence of HAIs results not only in greater patient safety, but also significantly reduces costs for hospitals.

Since HAI occurs primarily through contact with contaminated hands of transiently colonized health care workers (HCWs), Apollo Hospitals Chennai instituted a system to improve hand hygiene compliance among healthcare providers. The hospital created a new electronic record monitoring system to monitor hand hygiene compliance among its healthcare workers, and also established a hand hygiene audit team made up of 56 members.

The members of the team were given access to the hand hygiene audit app. Through the app, team members were able to observe and record the hand hygiene actions of various members of the healthcare staff. These statistics were then recorded and processed to determine compliance with the hospital’s hand hygiene policy. This initiative resulted in significantly higher hand hygiene compliance among various staff members.

For demonstrating outstanding leadership in the implementation strategy of an effective hand hygiene campaign, Apollo Hospitals Chennai was also honored with the World Health Organisation (WHO) and Asia Pacific Society of Infection Control (ASPIC)’s Asia Pacific Hand Hygiene Excellence Award in 2022.

Democrito O. Plaza Memorial Hospital

Philippines

Covid-19 home care information system (CHOCIS): enabling advanced and digitized information system in mitigating Covid-19 pandemic in Agusan del Sur

The Covid-19 pandemic threatened to overwhelm many healthcare facilities in the Philippines, where public hospitals already face a shortage of essential supplies and struggle to provide vital services. Knowing that a surge of infections would adversely impact its ability to provide adequate care, the Democrito O. Plaza Memorial Hospital (DOPMH) in the province of Agusan Del Sur pioneered a unique home care information system to help reduce the volume of patients and improve clinical outcomes for Covid-19 patients in the province.

Under CHOCIS, a physician decides whether a particular patient is suitable for home care. A local health worker then determines whether the patient’s home is suitable for isolation. If the home is found to be suitable, a patient and their caregivers are enrolled in the CHOCIS database, which allows health workers to consistently monitor the situation of home care patients. Each patient is provided with home care isolation kits, and the CHOCIS pocket guide, which contains information on Covid-19, a monitoring form, and contact details for the Covid helpline. Patients and caregivers are also advised on how to recognize complications and deterioration in their health status, which may require medical attention and hospitalization. CHOCIS also involves a coordinated Patient Transport Management system which facilitates patient movement from hospitals and other healthcare facilities to their home.

Moving forward, the program is expected to streamline related health information systems in the province to address other health issues, not only in emerging and re-emerging infectious diseases, but also in the management of lifestyle diseases such as diabetes, hypertension, and other malignancies.
**Dr. Jose N. Rodriguez Memorial Hospital and Sanitarium** Philippines

Picking up the pieces: the Dinagat Islands experience

Tragedy struck just as the Philippines was grappling with the surge of Omicron Covid-19 cases in late 2021. The country was battered by a Super Typhoon Odette, internationally named as Typhoon Rai, which left a trail of destruction in its wake. The typhoon mostly affected the Visayas and Mindanao regions, crippling local healthcare facilities which were already struggling with the impact of the pandemic.

Distant and isolated provinces such as the Dinagat Islands required particular support in coping with the typhoon’s catastrophic impact. This pushed the Dr. Jose N Rodriguez Memorial Hospital and Sanitarium to deploy a Health Emergency Response team (HERT) to the province, composed of ten physically fit and fully-vaccinated physicians, nurses and allied personnel.

The goal of the HERT was to deliver necessary healthcare services to affected residents in the province, which proved to be a challenge as the typhoon had wrecked various transportation and communication facilities.

With the help of stakeholders in the provincial health sector and the community, the team was able to set up a fixed post and deliver the necessary healthcare services to the Municipality of Cagdianao, the site of the typhoon landfall. The deployment lasted for nine days, during which team member were able to provide primary care services to affected residents.

Disaster response is not new to the healthcare professionals of Dr. Jose N Rodriguez Memorial Hospital and Sanitarium. As a premier Covid-19 treatment facility and an apex tertiary hospital, teams from the hospital have been deployed to various locales impacted by calamities throughout the years. It has a proven track record of providing quality service during times of crisis, and which has been consistently recognised by various local and international bodies.

**HOPE Foundation for Women and Children of Bangladesh** Bangladesh

A safe heaven for women and children living in the Rohingya refugee camps

Women represent a particularly vulnerable population in the sprawling Rohingya refugee community of Cox’s Bazar, Bangladesh. Women make up over 70% of the refugee population, but often struggle to obtain the most basic healthcare services, resulting in unnecessary maternal, infant and child mortality.

Saving lives through accessible and quality healthcare is the goal behind the HOPE Field Hospital for Women, which was established in 2018 by the HOPE Foundation. The hospital started with donated tents to provide basic maternal care following the first wave of the Rohingya refugee crisis. The tents were quickly replaced by semi-permanent structures. At present, the hospital includes two operational theaters, a separate isolation and treatment center that was expanded to respond to the COVID-19 crisis, outpatient facilities, a comprehensive emergency obstetric and neonatal care unit, and much more.

On a daily basis, the HOPE Field Hospital for Women provides outpatient care for over 300 people and supports the consolidation of preventive, promotive and curative services, allowing free, unrestricted access to primary care and sexual and reproductive health services. The hospital is open 24 hours a day, seven days a week, to provide both basic and comprehensive emergency obstetric and neonatal care. It also provides general primary care, such as vaccinations and general family planning services.

**People’s Hospital 115** Vietnam


Ventilator-associated infections was among the leading causes of death among Covid-19 patients, and is recognised as one of the most common hospital-acquired infections. In order to control and reduce mortality related to ventilator-associated infections, the People’s Hospital 115 developed a safety checklist that was carried out daily by its dedicated nursing staff.

The checklist was developed through a cross-sectional survey that assessed the rate of ventilator-associated infections, infection-related causes of death, and multi-resistant bacterial infections in ventilator-associated Covid-19 patients. A dedicated team of nurses and patient safety supervisors was then established to implement the intervention, and a full-scale training program was conducted to familiarise all staff with the safety checklist. The safety checklist was implemented through an easily accessible online form, which was filled out by nurses at every shift. Apart from increasing the monitoring of patients, the safety checklist also allowed nurses to proactively detect risk problems and take timely intervention measures for the patient.

The incidence of mortality due to ventilator-associated infections dropped significantly due to the implementation of the program. After two months of intervention, the mortality rate dropped to just 14.8%, compared with 33.8% before intervention. The mean duration of treatment in mechanically ventilated patients also dropped to 9.3 days, compared with 14.1 days before intervention. Similarly, the rate of multi-resistant bacteria infection was also significantly reduced, from 35.7% before the intervention to 21.2% after the project. As a result of these improvements, nurses also reported that the project produced significantly lightened their workloads and created a better work environment.
Cleveland Clinic Abu Dhabi

Running a state-of-the-art medical facility while meeting sustainability targets is no mean feat. At Cleveland Clinic Abu Dhabi, sustainability is woven into the fabric of the institution itself. The hospital is not only a world-renowned medical facility; it also boasts a sustainable physical design that is unmatched among its peers.

“Throughout the development of our medical campus, we were focused on establishing an environmentally-friendly footprint. Cleveland Clinic Abu Dhabi has developed a framework of policies, procedures and plans led by the Sustainability team for excellent performance in the context of international, regional and national sustainability targets and standards,” explained Marc Petre, COO at Cleveland Clinic Abu Dhabi.

As early as 2014, Cleveland Clinic Abu Dhabi was awarded the Leadership in Energy and Environmental Design (LEED) Gold for New Construction and Major Renovation. As the most widely used green building rating system in the world, this distinction from LEED recognises the innovative design and construction of the hospital’s medical campus, which uses the latest technology to promote energy efficiency and sustainability.

To obtain this certification, Cleveland Clinic Abu Dhabi’s facility underwent retro commissioning to ensure energy and water systems are optimized to minimize financial and environmental impact. For instance, its buildings use a smart-lighting system that senses the amount of natural sunlight in the room and automatically adjusts the amount of light. The facility also uses a solar thermal system, which provides 70% of the energy for water heating in the summer. The hospital has also rolled out high-efficiency plumbing fixtures and occupant sensors, which reduced 30% potable water demand. The hospital also uses a treated air conditioning condensate water system, which eliminates the need to use potable water for its landscape irrigation.

“A number of policy changes and in-depth analysis of energy and water management, indoor environmental quality, waste recycling, janitorial, landscape, exterior maintenance and pest management practices was also required to meet LEED standards. The facility also uses the ASHRAE energy audit system to reduce its energy consumption by up to 18%;” Mr Petre said. “All policies went through multiple rounds of revision and review before finalization based on market availability of products and vendor selection,” he added.

Promoting sustainability at all levels

The LEED certification is only one among the many awards under Cleveland Clinic Abu Dhabi’s belt. From January 2017, Cleveland Clinic Abu Dhabi is among the pioneer hospitals in the Middle East North African (MENA) region to use a Greenhouse Gas (GHG) tool in compliance with ISO 14064 Part 1. This method is certified by the GHG Protocol Corporate Standard, an internationally recognized standard for GHG inventories developed by the World Resources Institute (WRI) and World Business Council for Sustainable Development (WBCSD). This step confirms the institution’s commitment to quantify and report greenhouse gas emissions and removals going beyond Green Building Rating Systems requirements.

“The intent of this strategy is to document, through an accepted protocol for emissions reduction reporting, emissions associated with the building that contribute to climate change resulting from human activities at the hospital,” Mr Petre said. An independent third party, the provider of GHG Protocol’s certified auditing tool, has also been appointed to verify the reduction in the hospital’s emissions.

Cleveland Clinic Abu Dhabi’s commitment to sustainability is not limited to the physical design of its facilities. In fact, the hospital has adopted a sustainability charter to meet key performance indicators when it comes to sustainability. For instance, it has put in place a solid waste recycling strategy in place targeting a minimum of 30% waste recycling rate in line with the Abu Dhabi Waste Reduction Policy 2013. It also coordinates with its health professionals on methods and strategies intended to specifically decrease waste, recycle appropriate materials, reduce water and energy consumption.

Among its employees and stakeholders, Cleveland Clinic Abu Dhabi has developed an alternative commuting transportation strategy to encourage cycling, walking in the cooler months, and carpooling. It also promotes the use of fuel-efficient and low-emitting vehicles by Caregivers, patients and visitors to reduce overall greenhouse gases, such as by providing charging stations for electrical vehicles and switching to low-emitting fuel.
Modernizing a century-old medical facility is a daunting task. Established in 1913, the Matsuyama Red Cross Hospital has been a fixture in the traditional city of Matsuyama for 109 years. When this beloved institution began to deteriorate due to age and the impact of natural disasters, the hospital’s management and the local government rolled out an ambitious plan to create a modern, sustainable, and disaster-proof hospital that would stand the test of time.

The new Matsuyama Red Cross Hospital is designed to maximise energy efficiency. For instance, the facility uses solar power for its hot water supply, while its kitchens are equipped with sensing technology that provides energy savings of up to 40%. The hospital is also equipped with an advanced ventilation system. Operating rooms have state-of-the-art radiation air conditioning, which serves to prevent hypothermia in patients while at the same time protecting surgeons from surgical smoke. On the other hand, wards use natural ventilation system, cooling patient rooms using minimal energy. The new facility also boasts various rooftop greeneries, which provides heat insulation for buildings and promotes a good environment for convalescence. These energy-saving systems were kept in place even during the pandemic; in a stroke of good luck, the hospital’s focus on improved ventilation proved to be particularly beneficial during the pandemic.

Resilience is also a major factor behind the hospital’s renovation. The old facility was severely damaged in the Geiyo Earthquake of 2001, and hospital management saw the need to build a disaster-proof structure. To do this, the new hospital uses a base-isolated structure that allows it to provide continuous medical treatment even during earthquakes. The hospital also uses a foolproof water-saving equipment system that can be utilized even in the event of a disaster.

As a result of these efforts, the hospital’s energy use is over 25% lower compared to the average hospital in Japan. The hospital’s utility bill has also been reduced by about $2.5 million in four years. In terms of management, its bed utilization rate increased from 85% to 90% compared to the old hospital. Furthermore, the average length of hospital stay has decreased from 11 days to 10 days, which is proof to the improved quality of medical care in the new facility.

Matsuyama Red Cross Hospital’s innovative design has been recognised by Japanese regulators. The hospital received the highest rank of “S” under CASBEE, which is a Japanese standard for evaluating environmental impact. The hospital was also selected for the Sustainable Building Leadership Project, which is sponsored by the Building Research Institute. This award is given to advanced initiatives with grants, and Matsuyama Red Cross Hospital was highly evaluated not only for its advanced technology, but also for its integrated efforts with the local government and dissemination of the technology to the community.

Most importantly, the technology and know-how adopted at Matsuyama Red Cross Hospital have been passed on to other hospitals in Japan, including the Fukushima Red Cross Hospital and the Nagasaki Genbaku Hospital, among many others. When the Fukushima Red Cross Hospital was rebuilt after the Great East Japan Earthquake in 2011, it adopted Matsuyama’s base-isolated design and the extensive use of natural lighting. The Nagasaki Genbaku Hospital also adopted Matsuyama’s rebuilding method; hospital’s unique façade was created in consideration of solar radiation control in the hospital wards. Matsuyama’s Green hospital technologies—such as seismic isolation, solar radiation control, and radiation air conditioning— were also adopted by hospitals outside the Japanese Red Cross system, such as Tottori Central Hospital, Iwate Medical University Hospital, and Mutsumi Hospital.
Aga Khan Health Service  

Pakistan

Commitment to achieve net zero by 2030

In the global fight against climate change, healthcare institutions must also take active steps to reduce their emissions and minimise their carbon footprint. In response to this challenge, Pakistan’s Aga Khan Health Service has introduced its pioneering Net Zero plan. Under this project, Aga Khan Health Service seeks to have net zero carbon emissions by 2030 for the 115 hospitals which form part of its network.

For 2021, the Health Service’s baseline emissions for its 115 health facilities stood at 1,564 tons of CO2. In line with its Net Zero commitment, the Aga Khan Health Service has started to replace its equipment with energy-efficient appliances. It has also started to install solar panels and improve insulation systems in over sixty facilities across Pakistan. Most importantly, the organisation has chosen to replace its fleet of vehicles with energy efficient electronic models, and has already procured two electric vehicles for this purpose. These efforts are estimated to reduce 50% of emissions by 2026.

Aga Khan Health Service has also developed an innovative Carbon Management Tool which helps its track its emissions on a quarterly basis. This Carbon Management Tool is easily customisable and can be shared with other healthcare organisations. In fact, Aga Khan Health Service has already coordinated with the World Health Organisation (WHO) with the goal of sharing its emissions management system to other facilities in the region.

By tracking its emissions data, the organisation was able to determine the largest sources of CO2 emissions, which proved to be building energy and transport. Budgeting and procurement concerns were also taken into account. The organisation also provides extensive training to its healthcare professionals, ensuring that all employees are aware of the need to promote sustainability in hospital operations.

Buddhist Dalin Tzu Chi Hospital  

Taiwan

Race to zero by 2050, climate action of the hospital—from patients, people to planet

Participating in international campaigns to reduce emissions and promote environmental sustainability is one of the ways through which healthcare institutions can help tackle global warming and climate change. Among these global efforts is the Race to Zero campaign, a United Nations-led campaign to mobilise different businesses to fight climate change.

The Buddhist Dalin Tzu Chi Hospital is the first hospital in Asia to participate in the Race to Zero campaign. Although the hospital had long prioritised environmental sustainability in its operations, joining the Race to Zero movement further intensified its commitment to reduce its carbon footprint and achieve net-zero emissions by 2050.

As part of its net-zero commitment, the Buddhist Dalin Tzu Chi Hospital utilises technology to monitor its emissions. It uploads greenhouse gas emission data to a secure web-based platform, allowing identify areas that need further improvement. The facility has also rolled out several initiatives to combat climate change, including replacing all its lighting fixtures with LED sources, reducing electricity consumption and bringing down waste production, and even encouraging its staff to adopt plant-based diets.

The hospital’s physical structure is also designed to promote sustainability. It uses the intelligent Building Energy Monitoring System (IBEMS) to monitor the consumption of electricity of different departments. This system, which was developed by the Industrial Technology Research Institute in Taiwan, allowed the facility to save NTD 4.5 million due to the improvement of the energy efficiency per year.

Over the last decade, the hospital’s efforts in implementing sustainable healthcare and providing green services had been recognized by national and international bodies. Moving forward, it hopes to share its knowledge and expertise to promote sustainable healthcare across the globe.
Abdullah bin Omran Hospital for Obstetrics and Gynecology
United Arab Emirates

Promoting sustainability and green hospital at ABOH

Reducing energy consumption is crucial to promote sustainability in healthcare settings. This creates a key challenge for many hospitals located in warmer temperatures, since cooling systems are particularly energy-intensive and forms a large part of energy expenditure. The Abdullah bin Omran Hospital for Obstetrics and Gynecology is no stranger to this problem: with summer temperatures reaching up to 50°C, the hospital utilises a green building design to improve cooling and reduce energy consumption, and relies on renewable sources of energy to reduce its overall carbon footprint.

As part of its pledge to promote sustainability, the hospital building is covered with aluminum cladding to protect it from extreme weather and allow it to resist high temperatures. This provides a cooling effect across the facility, reducing the burden on the building’s cooling system. The facility is also designed in a way that allows plenty of natural light to reach patients, which lowers its reliance on artificial lighting sources. Motion sensors are also in place to reduce power usage, and the hospital is replacing all its lighting systems to LED sources.

The hospital also uses renewable energy for its operations. Solar-powered lampposts are found across hospital grounds, and there are also steps to use solar energy for water heating. In fact, the hospital’s solar power system has an output of 3,500 kWh a day. Lastly, water management also plays a crucial role in the hospital’s sustainable operations: water saving tools have been installed in showers and taps, and constant inspections are done to prevent leaks. The hospital also established a wastewater management system that allows it to use over 10,800 cubic meters of recycled water for landscaping and irrigation.

Apollo Proton Cancer Centre
India
Nature’s Footprint

Well-designed spaces have a positive impact on the well-being of patients, particularly for those suffering from diseases that require continuous and repeated treatment such as cancer. Studies show that access to natural spaces can reduce stress and improve healing for patients, and a natural ambiance also helps boost the experience of caregivers and healthcare workers.

This is why the Apollo Proton Cancer Centre uses well-designed natural spaces as an integral part of its state-of-the-art healthcare facility. For instance, its facility boasts a number of courtyards and atriums, allowing patients to experience nature while undergoing treatment. These healing gardens provide a sense of hope, renewal, and restoration for patients, and also providers caregivers with a place to recharge. Even within treatment rooms, the facility uses dynamic lighting, projection and sound to transform a cold, impersonal environment into one that is soothing and comfortable. This ambient experience has the added benefit of improving workflows and augmenting the efficiency of staff.

Apollo Proton Cancer Centre is the first and only proton therapy centre in South Asia and Middle East. The facility uses an innovative building design due to structural regulations regarding the use of equipment that emit radiation. The proton therapy facility uses thick concrete slabs to ensure radiation shielding, as provided in the Atomic Energy Regulatory Board (AERB) recommendations. The proton therapy areas are accessed from the waiting areas in the hospital through a double height proton therapy corridor. To soften the impact of these structures, the facility uses ambient music and plenty of natural light to provide a sense of peace and healing to personnel and patients alike.
Waste reduction in cataract surgery, a simple change with great impact?

Operating rooms produce a lot of medical waste. Much of this waste is seen as necessary to maintain sterile conditions during surgery, but many clinicians agree that the reduction of operating room waste will have a positive impact on the environment. At Centro Hospitalar Entre Douro e Vouga, a small change in operating room procedures resulted in a large reduction in waste, a promising development for many hospitals seeking to reduce their impact on the environment.

Anesthesiology specialists at the hospital theorised that tons of plastic waste will be avoided if the analgesic acetaminophen is administered orally instead of intravenously during cataract surgeries. The hospital performed a total of 1877 cataract surgeries in 2021 alone; doctors found that simply switching the formulation of acetaminophen has tremendous benefits in the overall ecology of the procedure.

Incidentally, changing the manner of administration of acetaminophen even reduced the workload of nurses, as they would no longer need to establish peripheral access for intravenous administration. This can be particularly difficult in the senior population, the typical patients of cataract surgery. The patients themselves would be spared the pain associated with skin puncture.

The project showed a potential 167kg yearly reduction in waste material, mainly composed of plastics associated with casing and tubing for administration of medication. By extrapolating these results to all of Portugal the change proposed in this project is likely to lead to a reduction in plastics used in cataract surgery of over 13 tons per year. This reduction will lead to a significant decrease in emissions since the production, transport and disposal of those plastics will be eliminated.

Hôpitaux Universitaires de Genève (HUG) Switzerland

Shaping the sustainable hospital of tomorrow: elaborating a sustainability strategy with the hospital’s stakeholders

Conducting a broad environmental strategy involving numerous stakeholders can be challenging for large organisations. This is particularly true for healthcare institutions, where it requires the cooperation not only of employees and staff, but also of patients, relatives, suppliers, and even the general public.

At the Geneva University Hospital (HUG), a coordinated environmental strategy required the mobilization of over 13,500 individuals. The HUG sought to shape a fully sustainable hospital by reducing its climate and environmental impact. Prior to launching the project, the hospital decided to call for a participative consultation involving all of its stakeholders. Using a digital platform, HUG employees, patients, other stakeholders and the general public were invited to vote, debate and suggest ideas regarding environmental sustainability within the hospital. Dedicated focus groups were also implemented to collect employees’ contributions with limited access to digital tools. Overall, 152 proposals were collected over six weeks, and more than half of the stakeholders’ suggestions were included in the strategy and action plan.

Through this initiative, the HUG created a structured strategy which organized all of its sustainable projects over the years with the aim to shape tomorrow’s hospital. These projects include the full use of renewable energy for hospital operations; the promotion of biking and eco-commuting among staff; the use of locally-sourced materials for hospital catering; and extensive waste management and water reduction. To widen the reach of its initiative, the HUG recently co-launched a sustainability working group which includes the five Swiss university hospitals in order to share experiences and knowledge as well as to discuss objectives. The HUG also aims to expand this partnership to all regional hospitals, even those beyond national borders.
Newcastle upon Tyne Hospitals
NHS Foundation Trust
United Kingdom

Towards a net zero carbon supply chain

Healthcare institutions must collaborate closely with their partners and suppliers in order to promote environmental sustainability. At Newcastle Hospital, management sought to expand its climate reporting and action beyond its own organisational carbon footprint, and proactively engaged with supply chain members to report and reduce their wider carbon footprint.

The project aimed to increase the amount of the supply chain carbon footprint being reported from direct emissions data, and reduce the amount being estimated using spend-based methods. The hospital’s suppliers are requested to report their carbon performance via the SmartCarbon platform, a free reporting platform, alongside turnover and value of sales. The platform then uses a representative proportion of these results to paint an accurate picture of a supplier’s carbon footprint. This enables Newcastle Hospitals to pinpoint areas in its supply chain where the carbon footprint may be reduced. In the project's first year, 22% of the hospital’s suppliers engaged in the process, far exceeding the hospital’s target of having 10% of its suppliers engaged in the carbon reporting framework.

These efforts are in line with the hospital’s target of reaching net zero emissions by 2040. This complements the National Health Service’s (NHS) goal of having net zero emissions by 2045. The project is also in line with the NHS roadmap for suppliers, which states that all suppliers will be required to publicly report targets, emissions and publish a carbon reduction plan aligned with the NHS net zero target by April 2027. The NHS Net Zero plan includes the commitment that by 2030 the NHS will not procure from any supplier that does not have its own Net Zero target.

NMC Royal Hospital, Khalifa City , Abu Dhabi
United Arab Emirates

Achieving energy savings by implementing energy efficiency measures to make green hospital

Reducing energy consumption is one of the surest ways to lower a hospital’s impact on the environment. However, for healthcare facilities located in warm regions, reducing energy consumption can prove to be a challenge due to their high reliance on energy-intensive cooling systems.

This was the challenge faced by NMC Royal Hospital, Abu Dhabi. In 2017, the hospital decided to focus on energy savings as part of its commitment to environmental sustainability. By working with a third-party consultant, the hospital was able to determine that lighting and cooling costs made up the bulk of its energy expenditure. It was able to reduce its energy consumption by replacing all lighting fixtures with LED lights, and by upgrading its heating, ventilation, and air conditioning system with more up-to-date and energy efficient equipment. These initiatives alone were sufficient to slash the hospital’s energy costs by 12% annually, and also enhanced the performance of various medical equipment.

Apart from these initiatives, the hospital also rolled out water saving and recycling projects across its facility. The hospital also undertook a major landscaping for its grounds, with the knowledge that greenery and a natural environment has a positive effect on the wellbeing of patients and staff.

NMC Royal Hospital’s sustainability projects showed that caring for the environment has a positive effect not only on the health outcomes of patients, but also on the financial viability of an institution. As a result, these successful sustainability initiatives will soon be adopted across all hospitals belonging to the NMC Healthcare group.
American Hospital Association Excellence Award for Healthcare Workers’ Wellbeing

Tan Tock Seng Hospital
Singapore

TTSH Staff Well-being Response Team

The personal well-being of healthcare workers is often overlooked in the fast-paced environment of large hospitals. Healthcare professionals face physical, mental, and emotional strain on a daily basis; yet, there are few safety nets and support systems available to most healthcare workers.

Knowing that healthcare workers also need to be cared for in the workplace is what led Tan Tock Seng Hospital (TTSH) to establish a Staff Well-being Team in 2020. Established in response to the pandemic, the Team had a common goal of maintaining morale, instilling well-being and hope, and helping distressed staff cope with the unrelenting stress brought about by the pandemic.

“The specific goals of the Team were to ensure that our staff get through the pandemic while our Hospital got our patients through the pandemic: this was the mission of the hospital, enounced at an early CEO Townhall, one of many communication platforms used during the pandemic,” explained Adj A/Prof Habeebul Rahman, Head (Psychiatry) and Senior Consultant at TTSH. “The team implemented regular sensing mechanisms for staff morale, created innovatively targeted interventions and had the ability to respond with agility to the significant pandemic demands to drive domains of emotional, mental, physical and social well-being.”

A scientific approach to wellness

During the pandemic, TTSH staff were at risk of constant burnout brought about by stress responses such as adverse events in patient care, abuse of staff by patients and visitors, and staff illness and the ever-present risk of bringing the infection home to their families. Social isolation was significant especially for foreign staff who were unable to return home and support their own families. Morale of staff was further hit by the Delta variant outbreak in the hospital, which led to quarantine of 1000 staff with those remaining needing to cope with patient surge.

While attending to hospital staff and patients, it was also recognised that the TTSH Staff Well-being Team also needed to look after other stakeholders in the hospital. These included hospital tenants who depended on hospital footfall for their livelihood, ancillary staff, workers on short term contracts, and students rotating through the hospital. The Team also needed to engage with the wider community around the hospital grounds.

In response to these pressures, the Team conceptualised staff well-being according to Maslow’s hierarchy of needs. The goal was to create a system not just to help staff withstand, but thrive during the outbreak. To do this, the team used a population-based approach, where various stakeholders were engaged to ensure that no one was left behind. The team also utilised sensing, brainstorming and implementation cycles for continuous improvement, and regular reporting to hospital leadership at pandemic management meetings.

“The team utilised three main sensing mechanisms. The first was a digitally enabled pulse survey rolled out from February 2020 that allowed us to track stress, resilience, challenges and real-time feedback from staff, with data extracted fortnightly to monthly for escalation to management. Common themes were addressed at communication sessions and struggling departments received additional support. Secondly, calls to staff support helplines were tracked and targeted interventions were developed, for example, addressing anxiety, personal distress and burnout. Thirdly, staff nominated as Welfare Officers from within every Department were able to raise ground issues via mobile chat with the Well-being Team, and Senior Management were accessible directly for quick executive decisions,” Mr Dominic Tung, Assistant Director (HR Well-being) noted.

The sensing data was then shared across management meetings. Feedback from staff, with data extracted fortnightly to monthly for escalation to management. Common themes were addressed at communication sessions and struggling departments received additional support. Secondly, calls to staff support helplines were tracked and targeted interventions were developed, for example, addressing anxiety, personal distress and burnout. Thirdly, staff nominated as Welfare Officers from within every Department were able to raise ground issues via mobile chat with the Well-being Team, and Senior Management were accessible directly for quick executive decisions,” Mr Dominic Tung, Assistant Director (Human Resource [HR] Well-being) explained.

The sensing data was then shared across the Team. With their diverse backgrounds and expertise, the Team was able to create multiple interventions aligned to its goal of helping staff. Positive psychology was a lynchpin in the Team’s brainstorming, aiming to move staff towards a common purpose and meaning, whilst supporting one another.

Once agreed by consensus, ideas were carried out by smaller teams to maintain sustainability in implementation. These wide-ranging interventions included the successful Spread a Smile Movement, psychological preparedness toolkits, mobile microlearning on stress management, virtual exercise and healthy living communities, bot-facilitated cognitive behavioural therapy, distribution of morale boosters to staff, psychological debrief groups and appreciation boards where members of the community penned gratitude notes were displayed throughout the hospital grounds.

These efforts had a tangible result on staff well-being. “From 2020 to mid-2021, our staff’s self-reported resilience was maintained between 5.8-6.1 (out of 10), outpacing self-reported stress (5.1-5.8). This was despite the initial uncertainty of the disease, rapid policy changes, personal impact of the disease, leave and travel restrictions, and a nationwide lockdown of 6 weeks,” Ms Lek Jie Ying, Assistant Manager (HR Well-being) noted.

Several of the services and interventions introduced over the two years have been adopted by the Hospital as best practices to maintain into the future. These include regular pulse surveys, the Welfare Officer programme which has since been expanded to the whole of hospital, and formation of Staff Care Unit under HR Well-being that looks into staff’s mental and emotional well-being exclusively.

“We are confident that our whole of systems approach, incorporating digital enablers to deliver well-being initiatives in healthcare will create longevity to our work, and encourage broader adoption,” Ms Lek said.
Al Amal Psychiatric Hospital, Emirates Health Services United Arab Emirates

Staff wellbeing in mental health

Working in a mental health institution can be particularly taxing for healthcare providers. For instance, it is well-recognised that staff in inpatient psychiatric services are more likely to experience violence from patients, and mental health professionals face a higher risk of burnout compared to their peers.

Recognising the need to ensure that its mental health professionals are well cared for, the Al Amal Psychiatric Hospital established a staff support program geared at improving staff wellbeing outcomes.

Under the program, the hospital rolled out a host of initiatives to reduce emotional distress and build resilience. This includes a weekly Mindfulness Programme conducted in both English and Arabic, as well as regular debriefing sessions for any staff involved in serious incidents. The hospital also established a comprehensive professional development programme for nursing staff, and provides weekly clinical psychology training for clinical staff. Nursing and security staff also undergo Prevention and Management of Violence and Aggression (PMVA) training to help them manage potential violence and actual violence from unwell patients.

As a result of these efforts, the hospital’s staff satisfaction consistently meets institutional targets. Moreover, in April 2021, Al Amal Psychiatric Hospital achieved ISO45001 accreditation for Occupational Health and Safety at work. Then, in June 2021 the Hospital achieved ISO45003 accreditation for Occupational Health and Safety Management for psychological health and safety at work. During the ISO accreditation process, Assessors highlighted the Staff Wellbeing programme and remarked that they found it outstanding and had not seen anything similar in the Region.

Despite these accolades, Al Amal Psychiatric Hospital is not resting on its laurels. Experts at the hospital are finalizing a manuscript addressing violence against mental health professionals, with the aim of submitting the article to a peer-reviewed journal in the near future. These efforts and initiatives would help other mental health facilities in the region to consider similar initiatives and attend to any staff related risks to ensure staff wellbeing.

Al Amal Psychiatric Hospital is a specialized mental health hospital which provides multidisciplinary care in a Clinical Academic Group (CAG) structure to patients across the life span. It provides mental health assessment and treatment in different CAGs such as general adult, children and adolescents, old age, intellectual disability, forensic and addiction. Al Amal Psychiatric Hospital is part of Emirates Health Services (EHS) and supported by Maudsley Health.

Fundació Sanitària Mollet Spain

Improving the lives of our people through the implementation and maintenance of a health promotion management system

Promoting the well-being of healthcare workers requires a multi-faceted approach. It is not enough to focus only on factors affecting the workplace; a successful health promotion strategy must also take into account the needs of members of the wider community.

At Fundació Sanitària Mollet (FSM), one of the largest hospital networks in Catalonia, Spain, caring for patients must go hand-in-hand with caring for healthcare professionals and promoting the health of members of the community. To this end, the FSM has spent years implementing different management systems not only to ensure the health and safety of its professionals, but also to promote environmental sustainability and energy management.

“Health organizations have always put their efforts into caring for the people they serve, but the experience of the FSM is that it is necessary to go one step further and take care of those who care, this includes professionals or any other person of community,” said Miguel Ángel Martinez, Health and Safety Coordinator at FSM.

To achieve its goal of being a healthy organisation, FHM rolled out several initiatives to improve the well-being of its professionals. FSM also worked to make its facilities more environmentally friendly, acknowledging that having a sustainably designed workplace is vital to promoting employee well-being. To extend its reach among members of the community, FSM has also implemented various efforts to ensure that its services and facilities are accessible even to economically disadvantaged persons. The FSM also works to promote decent living conditions for vulnerable people in its territory by working to prevent stigma, poverty and social exclusion. To do this, different projects have been developed that focus on the elderly, people with mental health problems and people with intellectual disabilities.

As a result of these efforts, the FSM was the first healthcare entity in the public health service to be certified as a Healthy Company in Catalonia. After obtaining this certification, other hospitals in Catalonia are also following FSM’s example to promote a safer and more sustainable facility for healthcare professionals and community members alike.
Myongji Hospital  Republic of Korea

Blue to Green – Corona Blue Support Team for the resilience of hospital workers

The pandemic caused extreme psychological stress among healthcare workers, leading to record rates of burnout. There were few safety nets in place for healthcare professionals—with many healthcare providers forced to isolate from their friends and family, most had no choice but to rely on their employers for emotional and psychological support.

This was a responsibility that Myongji Hospital took to heart. Acknowledging that stress and anxiety was rife among its healthcare professionals, the hospital immediately formed a multidisciplinary support team to prevent burnout and provide psychological support for employees in the COVID-19 pandemic.

Known as the Corona Blue Support Team, this multidisciplinary group was composed of 19 medical staff from 10 departments, including the psychiatry department. Their goal was to develop proper interventions to prevent burnout, and eventually break the vicious cycle of medical vacancy caused by severe psychological exhaustion. The team launched a system of monitoring the stress levels of employees, and also provided counselling for employees.

To ease the risk of depression and anxiety, the team conducted five surveys to determine the psychological condition of employees. They also produced educational materials and guidelines to help boost psychological stability, and provided one-on-one counselling sessions for many healthcare staff. The group also rolled out various activities, such as hobby classes, mindfulness meditation sessions, and music therapy. These initiatives were shown to improve the resilience of healthcare professionals, and effectively reduced the rates of burnout and staff attrition.

At present, these well-being initiatives are no longer limited to frontline staff. Myongji Hospital is working to spread these programs to all of its employees, in order to improve their psychological resilience and boost their emotional stability.

Not Seen on Me Foundation  (Foundation NWPM)  Poland

WySPA program, support for employees of healthcare entities

Medical personnel are particularly susceptible to mental health issues, given the demanding nature of work in the healthcare sector. Many healthcare professionals battle anxiety, depression, and stress on a daily basis, and there is a need to provide support for medical workers to boost their psychological well-being.

In response to this challenge, the Not seen on Me Foundation seeks to improve awareness about mental health issues and provide psychological support for healthcare workers. In collaboration with the Polish Hospital Federation, the Foundation has created a proprietary program, unique on a national scale, where every hospital employee can obtain the help of a psychologist, psychotherapist or psychiatrist. The Foundation has established a helpline and support groups where medical professionals can freely seek the help of mental health experts. With the help of mental health specialists, healthcare workers are aided in coping with mentally taxing situations, be it at work or in their private lives.

Another part of the program focuses on psychological competencies of managers in the healthcare system. Through workshops and other forms of communication, the Foundation seeks to enlarge managers’ knowledge of mental health at work, and urges them to improve work conditions toward a better mental health environment. The Foundation also conducts workshops for various groups of healthcare workers with the goal of improving communications, solving difficult situations with patients, and improving their satisfaction at work. Since it was launched in 2020, the project has been well received by healthcare workers in Poland, and more hospitals are joining the initiative.
**Gillette Children’s Specialty Healthcare**  United States

Provider-led initiatives to improve wellbeing

Small improvements in the workplace environment of healthcare institutions can have a major impact on the well-being of medical professionals. A study by the American Medical Association shows that burnout among healthcare workers is associated with increased administrative burden on staff, which in turn leads to less time spent on direct patient care.

The Gillette Children’s Specialty Healthcare was quick to recognize that improving institutional processes can help reduce rates of staff burnout. This is why it established the Performance Management and Strategy Office (PMSO), a unique multidisciplinary team which collaborates with teams across the hospital to ensure successful implementation of high-impact, cross-departmental initiatives. By conducting a survey of staff across different departments, the PMSO was able to pinpoint that spending an excessive amount of time to process documentation was one of the major causes of stress among the hospital’s employees.

The results were used to identify major themes and work topics, which were then used to create provider and staff-led workgroups, facilitated by a PMSO team member. Each workgroup had specific goals and tasks, and included representation from different specialties, clinic locations, and provider type. Once the workgroups were assembled, they identified priorities for work and then began developing and implementing solutions. Along the way, workgroup members solicited feedback from the larger organization, including from managers, associate medical directors, and other provider leaders.

These efforts led to institutional improvements such as increased transparency, a better care team structure, and decreased administrative burden on healthcare workers. The project was well received by teams, in large part because the providers and clinic staff themselves led the identification of solutions. This engagement allowed for the wider acceptance and adoption of the proposed solutions from providers across the organization.

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**Lorma Medical Center**  Philippines

Effective internal communications and its effect on staff productivity, retention and job satisfaction

Many hospitals face challenges when it comes to staff retention. Low job satisfaction is prevalent among healthcare workers, while hospitals are often guilty of ineffective people engagement. To combat these trends, Lorma Medical Center Inc. rolled out a proactive communications program that was responsive to the needs of its staff.

“The daunting challenge to mitigate staff attrition in Lorma predates the pandemic. In 2019, the percentage of staff turnover was 1.30%. Then came the uncertainties of the pandemic to healthcare workers which posed an even bigger threat in curtailing staff separations. On the onset of the Covid-19 pandemic, resignations reached a high of 1.46%,” said Dr. Emily Joy Gacad, Executive Director of Human Resources at Lorma Medical Center.

As part of its communications plan, Lorma Medical Center administered a Mental Health Survey to acquire baseline data, which in turn allowed the hospital to roll out mental health initiatives through communication programs. It also instituted regular forums that allowed staff members from various departments to air their needs and grievances. To increase engagement, the hospital’s president and senior officers also institutionalized dinner meetings for doctors, where they welcomed feedback regarding hospital operations from doctors. The hospital also established an open door policy in all employee meetings, and informed all staff members that communication with senior officers is always available. Lastly, the hospital provided emotional support and counselling for all employees, especially for those who became afflicted with Covid-19.

Thanks to these efforts, Lorma Medical Center was able to report low turnover rates and increased people engagement at the height of the pandemic. The hospital also posted 100% fill rates in nurses' hiring, which lead to the uninterrupted provision of healthcare.
Caring for the caregivers: supporting nurse wellbeing through hospital-based programs

Nursing is recognised as one of the most stressful roles in healthcare. In order to safeguard the welfare of nurses and nursing staff, hospitals need to roll out meaningful initiatives to provide physical and psychological support to nurses.

Recognising the crucial role played by nurses, Tawam Hospital in Abu Dhabi launched the Your Health First campaign, which aims to secure the welfare of nursing staff. The program sought to encourage nurses to lead healthy lives and transform unhealthy behaviors into healthy ones. The aim is to educate nurses about healthy living, sustainability, exercise and nutrition so they can make informed choices about the foods they buy, the importance of a balanced diet, and the way they live their lives. During the start of the COVID-19 pandemic in 2020, the initiative’s focus was directed towards ensuring nurses were maintaining general health and wellbeing despite the challenges at the workplace.

The initiative started by creating a wellbeing taskforce, with members meeting regularly to design the program. The task force then identified Wellbeing Champions in the different nursing units to help implement the project. A yearly wellbeing calendar was created and disseminated, with monthly wellbeing themes adjusted according to the UAE settings. The taskforce, together with individual Wellbeing Champions, also created guidelines on how wellbeing initiatives can be implemented within particular nursing units, even outside working hours. Wellbeing was also included as a standing agenda in the hospital’s governance meetings.

As of 2022, 33 nursing units with around 1300 nurses, participate in the program. There are currently 163 wellbeing champions across the hospital. The initiative was well-received by the nurses and the activities continued even during the COVID-19 pandemic, when nurse wellbeing was greatly impacted.

The work, family and personal life balance: conciliation management system and wellbeing and hapiness work in ULSM

A healthy work-life balance is fundamental to the physical and psychological wellbeing of medical professionals. Unidade Local de Saúde de Matosinhos (ULSM) is committed to promoting a healthy balance between work and the personal lives of its healthcare workers; to this end, it adopted unique management system geared at measuring and improving the work family and personal life balance of its staff.

ULSM conducted a survey of its over 2,300 employees to determine their needs and obtain their inputs regarding the hospital’s work-life balance policy. By reviewing the results of this survey, ULSM was able to determine specific areas for improvement in its current human resource policy. A training programme was conducted to improve interpersonal relationships and communication among staff, and workshops regarding mental health and psychological resilience were also implemented.

The implementation of these programs covers all levels of ULSM, from the board of directors to auxiliary staff. By improving communication and staff engagement, the program aims to increase the satisfaction and motivation of healthcare workers at all levels. The integrated management system is certified by ISO 9001 and NP 4552, recognising its invaluable contribution to the hospital’s workplace culture and quality of care.
Emirates Health Services  
United Arab Emirates  

Mental Health of Older Adults (MHOA) Clinical Academic Group (CAG)  

Geriatric care providers often focus too much on the physical health of their patients, overlooking the mental health needs of elderly patients in the process. There are hardly any services dedicated to serving the mental health needs of older adults, despite the fact that a significant number of this population suffer from cognitive decline and related illnesses.

This is why the Al-Amal Psychiatric Hospital initiated the Mental Health of Older Adults (MHOA) Clinical Academic Group (CAG). This project offers the first integrated, comprehensive, specialized mental health service in the United Arab Emirates, offering dedicated inpatient, outpatient, and community outreach mental health services to the older population of the northern emirates.

The project, which was established in collaboration with Maudsley Health in 2019, uses innovative technology to provide timely diagnosis and management of the mental disorders affecting the elderly. For instance, MHOA uses Artificial Intelligence for dementia detection, and employs integrated cognitive assessment technology in primary health care centers. MHOA is also the first institution in the Gulf region to offer Cognitive Stimulation Therapy, the first non-pharmacological therapy for dementia.

Serving an underserved population  
In the UAE, it is estimated that individuals aged older than 60 represent 4% of the total population. The World Health Organization (WHO) estimates that this percentage will increase 12-fold by the year 2050. And yet, there hasn’t been any dedicated mental health service for the elderly in UAE. Older adults received mental health within general adults by psychiatrists and most of the interventions were mainly medication based. Neither were there any validated tools to assess cognition, which is essential to the process of diagnosis of dementia, and there was no validated psychosocial intervention that was culturally adapted to suit the client groups in the UAE.

To address this gap, the MHOA uses technology to provide the highest standards of care while maintaining the patient’s autonomy and dignity. Through the prevention and timely diagnosis of the mental disorders affecting the elderly, MHOA CAG seeks to reduce further complications and ease health the burden on families. The MHOA CAG works closely with patients’ families to provide specialised care for older adults across different stages of illness.

In terms of clinical care, MHOA CAG promotes the use of integrated cognitive assessment (ICA) to enhance the timely diagnosis of mild cognitive impairment (MCI) and dementia. The use of ICA reduces the rate of undiagnosed dementia, and improves the process of referring cases from primary care to memory clinics. With early diagnosis, ICA helps reduce the pressure and burden of care on the health system and family members.

MHOA CAG also provides Cognitive Stimulation Therapy (CST) which is specially customized to the culture of the UAE. This approach provides innovative non-pharmacologic treatment to patients with mild to moderate dementia, and improves the mental ability and memory of dementia sufferers. To date, there have been 152 Arabic CST sessions ranging from 90-120 minutes per session twice a week. This continues to be sustained with good levels of attendance and feedback for the sessions.

The MHOA project also provides training and education for healthcare providers across the UAE. It adapts recognised international training in old age psychiatry to suit cultural needs in the UAE, with the aim of establishing an Old Age Psychiatry Fellowship programme in the Gulf region. Further, as part of its research goals, the MHOA CAG adopts international treatment modalities to Emirati and gulf culture. The MHOA CAG is active in research, with a portfolio of six publications. Two of these publications involved the discovery of previously unregistered mutations in patients with young onset dementia.

On the societal aspect, MHOA CAG also seeks to raise awareness about mental health and wellbeing in old age to help Emirati adults to age gracefully and reduce the stigma associated with mental disorder and infirmity in later life. The MHOA CAG also works with social services and trains staff to ensure that older adults are well cared for and protected.

The MHAO has received several accolades for different projects since its inception, both from within the organization, nationally, outside of the organization, and regionally. In July 2021, the MHOA CAG received the Emirates Health Services (EHS) Innovative for Health Award for the Year 2020 for Research Papers published in the field. In February 2022, the Culturally adapted CST and the Memory Clinic were acknowledged as an innovation for pioneering health award with Al Amal Psychiatric hospital, amongst other service developments within the hospital.
Emirates Health Services
United Arab Emirates

Transformation of the AMI, advanced AV block and bariatric surgery management by digitalized clinical pathways

Cardiovascular disease and morbid obesity are among the leading causes of mortality worldwide. The successful treatment of these conditions require a structured multidisciplinary care plan. Unfortunately, many healthcare institutions fail to provide holistic treatment for these conditions, resulting in less-than-ideal clinical outcomes for patients.

In Al Qassimi Hospital (AQH), hospital management zeroed in on transforming existing care delivery by providing a holistic approach to the treatment of cardiovascular diseases and morbid obesity. The hospital sought to improve efficiency by developing a standardized system of care, which, in turn, improved the timeliness and quality of care delivered in emergency situations.

“The hospital leadership was looking for clinical pathways which have critical components including an evidence-based, multidisciplinary approach. Unlike the previously existing clinical pathways, which cover only certain phases of the care process, AQH designed new and comprehensive clinical pathways which consist of complete duration of the program from diagnosis to follow-up,” explained Mr. Saeed Alrahma, Excellence & Pioneership Section at AQH.

Through this digitalized clinical pathway, AQH streamlined and standardized the delivery of cardiac and bariatric surgery care. The hospital used rule-based clinical automation to streamline its workflow, minimize system reaction time and standardize practice across all healthcare providers. By standardizing care management between different disciplines, AQH was able to enhance patient experience, produce better clinical outcomes, and increase patient compliance with care management.

Tan Tock Seng Hospital
Singapore

Hospital without Walls (HoW) – Tan Tock Seng Hospital’s digital transformation strategy

Across industries, advancements in digital technologies has enabled businesses to transform, redefining consumers’ relationship with providers and their expectations. Despite common consensus on the benefits and need to digitalise, digital transformation in the healthcare sector has been lagging and is challenging on many fronts. The adoption of digital strategies face institutional and systemic hurdles—there are many legacy systems in place that resist the adoption of new solutions, while sufficient digital literacy remains a challenge for many patients and healthcare professionals.

Against this backdrop, Tan Tock Seng Hospital (TTSH) sought to establish a seamless digital health experience to improve clinical outcomes for its patients. “Digitalisation is a key enabler for a ‘flipped care’ model we are striving towards for our population. Healthcare must evolve from a facility-centric to person-centric model; from episodes of care to relationship-based care; from a volume-based model to a value-based care,” said Prof. Eugene Fidelis Soh, CEO at TTSH & Central Health, Singapore.

“Digitalisation is about optimising the use of technologies to build better clinical, business and workforce models, so as to achieve our quadruple aims. To do so, there is a need for organisation-wide shifts to achieve digital transformation in the way we work and deliver care,” he added.

To steer this strategy, a new Digital Transformation Council (DTC) was established in TTSH in September 2020. The DTC serves as a strategic committee to drive our Hospital Without Walls digital transformation strategy and the matrix of seven Strategic Innovation Programmes (SIP) and five Digital Innovation Technologies (DIT). SIPs integrate innovation projects into a coherent development roadmap and oversee digitalisation projects in areas spanning tertiary and step-down care continuum, as well as key backend enabling functions.

On the other hand, DITs are technology-driven expert workgroups that develop key technological platforms to support relevant use cases and operations. DITs may provide for middleware support to integrate the use of these technologies.

“Since its inception in September 2020, the formation of DTC and matrix of SIPs and DITs have enabled progress in the Hospital Without Walls digital transformation strategy. Till date, there have been a total of more than 100 digital transformation projects that have been completed or ongoing in TTSH,” said Ms. Lim Jin Yin, Assistant Director at Centre for Healthcare Innovation. “Over this two-year journey, new SIPs have been progressively onboarded. Projects are also well-received by patients and providers alike, who welcome the introduction of new digital initiatives that enable us to better deliver care within hospital and out in the community.”
The old adage states that an ounce of prevention is better than a pound of cure—and this trite saying is particularly applicable when it comes to cancer prevention and treatment. Late-stage cancer detection is a significant cause of mortality among patients. Unfortunately, in the US territory of Northern Mariana Islands, early cancer screening is largely unavailable to the island’s 50,000 inhabitants, as residents often do not access care for cultural, family, religious, and financial reasons.

This is why the Commonwealth Healthcare Corporation launched the Cancer and Associated Risks Early Screening (CARES) Project. Through this initiative, the organisation provides no-cost cancer prevention counseling, vaccines, screening advice and testing to residents. The program initially started only with the hospital’s employees, but was soon expanded to other members of the community since it was very well received by staff.

Cancer is particularly prevalent in the territory. Since betel nut chewing is common, oral cavity cancer is found in young adults and has contributed to 13% of cancer-related mortalities. The CARES project sought to remove barriers to care accessibility by providing screening at no cost.

Pathology and Genetics Department
United Arab Emirates
Leading innovative & sustainable approach in fighting Covid-19 pandemic for better patient outcome

Providing fast, accurate, and accessible testing was one of the biggest challenges faced by healthcare providers at the beginning of the Covid-19 pandemic. Few healthcare professionals had adequate training in conducting polymerase chain reaction (PCR) tests, while reagents and other tools were hard to procure due to high demand and disruptions in the global supply chain.

Amidst this chaotic backdrop, the Dubai Health Authority was able to establish partnerships with private institutions to provide timely and widely-accessible Covid-19 testing to all residents. This novel public-private partnership allowed the DHA to increase the availability of PCR tests by facilitating the procurement of reagents and consumables at negotiated prices. Through its Pathology and Genetics Department (PGD), the DHA was also able to establish testing sites at various areas in Dubai, including a large testing center at the airport and numerous drive-through stations at various locations across the country. To maintain the high accuracy of tests, the DHA also inspected private laboratories for compliance with local and international standards, and rolled out an interlab comparison system covering different testing centers. With the cooperation of private laboratories, the PGD also used big data to predict potential pandemic hot spots.

This public-private partnership would not have been possible without the rapid implementation of the partnership required significant changes in organizational culture. The PGD engaged all stakeholders and closely communicated with private laboratories, which ensured a uniform and coordinated approach in battling the pandemic.

Through the successful implementation of this public-private partnership, Dubai was able to conduct up to 90,000 tests per day, with a uniform turnaround time of just 24 hours. This allowed public health authorities to trace and isolate infected patients promptly, which reduced the transmission of Covid-19 among the populace. As a result, Dubai had one of the lowest rates of infection, hospitalization and mortality across the world, and the country was able to quickly reopen its economy and avoid lengthy and costly lockdowns.
Emirates Health Services
United Arab Emirates

Healthcare Innovation Framework (HCIF)

Innovation is a key driver of growth. In healthcare settings, innovation is crucial to ensure that patients get the most up-to-date methods of care, and healthcare institutions with a culture of innovation are best placed to provide the best care for their patients.

Recognising the importance of innovation and technological development led the Emirates Health Services (EHS) to establish its Healthcare Innovation Framework (HCIF). Through the HCIF, the EHS engages healthcare service providers from private and public sectors in co-designing the next generation of healthcare services. With this initiative, the EHS seeks to advance the provision of healthcare in the region and ensure that innovation is incorporated at every level of its organisation.

The backbone of HCIF is Afkari, a pioneering digital innovation platform that allows healthcare professionals, patients, and other stakeholders to submit their ideas and suggestions. This opens the door for collaborations between public and private healthcare providers. Through HCIF, EHS was able to train over 5000 employees on the principles of innovation, entrepreneurship and creativity. In turn, this led to the development of 38 innovative projects across various segments of the EHS, as well as the registration of various intellectual properties and the publication of a large body of research works. Moving forward, EHS seeks to strengthen this culture of innovation in the work environment, increase the overall innovation engagement at all levels and establish innovation governance across the organisation.

Philippine Children’s Medical Center
Philippines

“TATAG PCMC”: The Hemodialysis Unit COVID-19 Pandemic Response

Dialysis patients are at a higher risk for more severe illness due to weaker immune systems. These patients faced a unique kind of risk during the Covid-19 pandemic. Their condition made them more susceptible of contracting the virus; at the same time, they could not afford to stay at home as they had to continue with their scheduled dialysis treatments in free-standing hemodialysis centers or in hospital-based facilities.

The Hemodialysis Unit of the Philippine Children’s Medical Center (PCMC) is the only pediatric-dedicated hemodialysis unit in the Philippines. During the pandemic, the unit took extra steps to ensure that its young patients can continue to access treatment without being exposes to the virus. To do this, the Hemodialysis Unit rolled out organizational changes in response to the pandemic. For instance, the hospital prioritised the construction of its own COVID-19 Screening laboratory, and established an isolation Hemodialysis Unit and COVID ward. Hospital management also provided transportation and lodging for the hospital staff to address the stringent lockdown implemented in the capital region. Once vaccines were made available, the hospital immediately prioritised the inoculation of dialysis patients.

The hospital’s response required the collaboration of all stakeholders and staff. The hemodialysis staff secured adequate inventory of medications, dialysis stocks and preventive maintenance of all machines and equipment that ensured continuous delivery of services. They also engaged with the children’s caregivers to identify areas with potential for improvements. On the other hand, the social service unit ensured adequate funding of all dialysis services, especially for the indigent patients.

With its proactive stakeholder engagement, PCMC was successful in delivering safe, uninterrupted services to patients receiving maintenance hemodialysis. Likewise, it opened its services to patients from other hospitals needing tailor-fitted treatments like acute dialysis and other extracorporeal treatments for small children.
**HONOURABLE MENTION**

**Portugal**

**Portuguese Oncology Institute of Porto**

**Patient Reported Outcomes (PROs): a pathway to patient centered clinical practice**

Major changes are taking place in the Kingdom of Saudi Arabia (KSA) as part of its goal of national transformation by 2030. The Kingdom’s Vision 2030 aims to improve access, quality, efficiency and resilience across various social sectors, and the operation of the healthcare system is a key element of this transformation.

Developing healthcare leaders is crucial to accelerate cultural change in the healthcare sector. In this light, the Horizons program is specifically designed to identify and nurture future leaders and imbue them with the necessary leadership attitudes, behaviors and capabilities that will allow them to challenge the status quo.

The program is designed to equip participants with the latest leadership thinking through a variety of innovative modalities. Subject areas include important new themes like systems thinking and leadership of systems that disrupt the established paradigms and bring new thinking from different perspectives. This allows them to recognize and implement change where it is most needed, harnessing the energy and technological innovation associated with the younger demographic.

The Horizon program initially aimed to train between 50 to 100 leaders per year. The program uses a merit-based selection criteria, weighing applicants based on accomplishment, initiative, commitment, and leadership competency. Following the successful graduation of its first cohort, the program is now being scaled up to enroll even more emerging leaders throughout the Kingdom.

**Saudi Arabia**

**Saudi Commission for Health Specialties - Healthcare Leadership Academy**

**HORIZONS for emerging health leaders in Saudi Arabia: an innovative national program for transforming into a world class health system**

A cancer diagnosis creates significant adverse impacts to a patient’s quality of life. In order to improve a patient’s quality of life during treatment, modern cancer care requires medical professionals to collaborate closely with patients. Identifying patient reported outcomes (PROs) plays an important role in patient-centered care, as it allows healthcare professionals to identify the best course of treatment that should be offered to an individual patient.

For this purpose, IPO Porto realized that it was essential to use PROs to provide better care and more personalized follow-up for its patients. As a leading oncology hospital in Portugal, IPO-Porto tapped a multidisciplinary and motivated team of experts with the goal of developing a system that uses PROs as a fundamental tool in clinical practice.

The team developed an electronic platform through which patients can answer an internationally validated quality of life questionnaire. The questionnaire is deployed at several points in a patient’s treatment, and answers form part of a patient’s electronic medical record to ensure continuity and consistency. A patient’s answers are taken into account in making therapeutic and monitoring decisions, allowing for improved efficiency and quality in patient management. Patients are informed at the beginning of treatment regarding the benefits of answering the questionnaire, but participation remains completely voluntary.

Since its implementation in late 2020, around 2000 patients have agreed to join the quality of life circuit, with an adherence rate of approximately 75%. The implementation of this system led to intangible gains, such as more personalised treatment and increased centralization of care. There were also tangible gains such as the reduction of absenteeism, optimised appointment times, reduced visits to the emergency room and requests for imaging exams, a lower number of readmissions, and the decreased consumption of medication.

**Oman**

**Royal Hospital**

**Early discharge with breast drain during Covid-19**

A long hospital stay after undergoing breast cancer surgery used to be the norm at the Royal Hospital in Oman. Breast cancer patients stayed in the hospital for an average of six to 10 days after surgery. The long confinement disrupted the family and social life of many women, leading some patients to refuse having surgery in the first place.

Recognising that many patients sought a shorter hospital stay, the Royal Hospital’s breast care management team decided to roll out an innovative method of modifying the breast drain system to allow early discharge of breast cancer patients. Under the new system, patients were discharged within five days from surgery, with the drain left in situ. An oncology treatment room was then reserved in the hospital’s outpatient department, where patients were treated once they returned to have the drain removed. Prior to discharge, the breast care nurse communicated extensively with patients regarding wound treatment and drain care at home. The breast care nurse also maintained a social media page and a dedicated phone line through which patients could reach out with their concerns. This project, which was the first of its kind in Oman, had a significant impact on improving patient satisfaction after a breast cancer operation. The project also helped keep beds in the hospital free during the peak of the Covid-19 pandemic; at the height of the pandemic, patients were discharged within three days instead of five days. This not only helped ease the pressure on the hospital, but also protected patients from hospital-acquired infections and other adverse effects of a long hospital stay. The Royal Hospital has published its experience in local newspapers, and other oncology centres in the country are now considering the implementation of this innovative treatment method.
Prescription medicines are notoriously misused by many patients. About 45% of prescribed medications are not taken by patients, leading to environmental pollution, unsafe practices, clinical waste, and compromised quality of care. The overuse, misuse, and underuse of medications are longstanding and widely acknowledged global concerns; yet there are neither any generally accepted methodologies nor mandates to address these challenges.

To address this gap, a small group of healthcare professionals from the Veterans Health Administration (VHA), working across the USA, developed VIONE: an innovative and scientific methodology that optimizes and simplifies medication deprescribing. VIONE uses medical informatics and population health management to optimize the prescription of various medicines, which in turn increases the quality of care and improves patient safety.

“Our group is multidisciplinary, multicultural, multigeneration and our focus remains improvement of patient safety and quality of care through decreased use of potentially inappropriate medications (PIMs) and medication optimization,” noted Dr Saraswathy Battar, who was the Medical Director at the Michael E. DeBakey VA Medical Center. “The VIONE methodology is an award-winning, USA-based patient safety project that uses clinical, academic, research, leadership, innovative informatics to achieve sustainable reductions and optimization of PIMs to prevent adverse outcomes such as hospitalizations, falls, clinical waste, even death while reducing costs and empowering patients and medical providers.” she said.

A multi-pronged approach
VIONE medication deprescribing methodology uses five filters to promote patient safety – Vital, Important, Optional, Not indicated, and Every medication has an indication (VIONE). Examples: Vital = lifesaving medicines such as diabetes medicine, Important = drugs important for a patient’s quality of life, such as pain and constipation medicines. Optional = elective medications, such as vitamin supplements which do not make an absolute difference whether taken or not taken. Not indicated = prescriptions which may not be ideal for all situations, might cause more harm than help, such as the use of blood pressure-reducing medications when the patient is suffering from low blood pressure with falls and dizziness. Lastly, Every medication has an indication serves as a warning that if the prescribing providers and consuming patients do not know the reason for a prescriptions, deprescribing could be carefully considered.

Through VIONE, the VHA was able to decrease polypharmacy-related preventable harm across the continuum of clinical care across various clinical settings and locations in the USA. With the understanding that medication deprescribing is a complex process that requires balancing multiple considerations, VIONE offers globally viable, simple, portable, practical strategies and easily understandable for both patients and caregivers. It promotes holistic approaches, realizing that sometimes less medications offer more comfort and safety. It can be easily adapted across different global healthcare settings with ease and effectiveness.

Since it was launched, VIONE has garnered prestigious awards and has been adopted across the national healthcare delivery model. VIONE has also formed a global alliance with Sustainable Medicines Partnerships to share lessons learned, best practices, and promote environmental safety through safe medication optimization practices. "VIONE exemplifies successful project initiation, refinement, incremental expansion to regional, national and international therapeutic and global alliances,” Dr Battar said. “Our goal is to eventually make VIONE a colloquial global tool that transforms safe medication practices and allows patients and healthcare teams to easily, effectively, continually use the five V-I-O-N-E filters to determine whether a medication should be prescribed or not, or if it could be deprescribed” she added.
Riley Children’s Health at Indiana University Health  
United States

Improving mortality from severe sepsis in pediatric patients to zero

A difference of just a few minutes can spell the difference between life and death for pediatric patients with severe sepsis. Quick intervention is crucial to the successful treatment of this condition; tragically, many young patients suffering from severe sepsis fall through the cracks at busy emergency departments in large hospitals.

This led physicians at the Riley Hospital for Children at Indiana University Health to develop a unique system that rapidly identifies cases of severe sepsis/septic shock (SS/SS) among pediatric patients. This system seeks to identify SS/SS within one hour of a patient’s arrival at the hospital, and to ensure that patients identified with SS/SS receive appropriate treatment less than one hour after recognition.

“Poor sepsis recognition is identified as a problem in the literature and upon exploration, our hospital’s data confirmed this poor ability to recognize sepsis,” said Dr. Brian Wagers, Pediatric Emergency Medicine Physician, Associate Chief Medical Officer, and Medical Director of Quality and Safety at Riley Hospital.

“One of the major difficulties in pediatrics is that most scoring systems are vital sign based, but in the pediatric population, children are often frightened when entering a new environment and fever is a very common occurrence. These two facts together often result in abnormal vital signs which cloud the picture and make identifying those patients with sepsis a difficult proposition, especially in a busy emergency department,” Dr. Wagers explained. “We needed to design a program that would not cause other populations to suffer deterioration in care due to resources devoted to septic patients. This intentionality allowed for wholistic assessment of the patient regardless of etiology for vital sign abnormality and quick intervention.”

To execute this project, the team first combed through the hospital’s data for every case of sepsis identified to look for commonalities and potential targets for improvement. They then developed standardized order sets with pre-selected orders for intravenous fluid, antibiotic, and laboratory evaluation choices based on pediatric sepsis guidelines. If a patient scores above a pre-determined number on the sepsis score, the entire care team is assembled immediately for rapid institution of appropriate intravenous fluid and antibiotic treatments.

King Saud Medical City  
Saudi Arabia

Decrease mortality rate and intubation in preterm neonates (28-32 weeks of gestational age) by initiation CPAP project in the delivery room.

Infants who are born prematurely frequently require extensive respiratory support. But providing respiratory support to neonates requires precise timing—a premature infant’s mortality risk increases exponentially if respiratory support is not provided at the right time.

This was the challenge faced by King Saud Medical City, a tertiary hospital with over 1,400 beds located in Saudi Arabia. Physicians at the hospital realized that the mortality rate of premature infants could be significantly reduced through the proper implementation of continuous positive airway pressure (CPAP) in the delivery room.

Prior to reviewing the hospital’s CPAP implementation, the healthcare facility lacked standardized clinical practice guidelines to initiate CPAP in the delivery room. There were no clear criteria to initiate CPAP, resulting in a significantly high mortality rate for neonates. There were also insufficient medical supplies to support the transfer patients from the delivery room to the neonatal intensive care unit (NICU), which adversely impacted the clinical outcomes for neonates. There were also few physicians, nurses and respiratory therapists familiar with initiating CPAP, and there was no clinical documentation of newborn resuscitation from the delivery room.

To address these issues, King Saud Medical City formulated standardized clinical practice guidelines, which provided clear criteria for the administration of CPAP in the delivery room. The hospital also conducted workshops among its healthcare professionals to increase awareness about CPAP, including strategies on how to conduct newborn resuscitation. As a result of these efforts, the hospital was able to reduce neonate mortality and intubation rates, and improved the survival rates of premature infants. The project was also well received by other healthcare facilities in Riyadh, and is now due for implementation across other NICUs.
Apollo Proton Cancer Centre  
India 

Project “Winnable Battles” - chasing the elusive dream of zero hospital acquired infections in entirety 

The implementation of a strong infection prevention and control program is paramount in prevention of infections in both patients and health care workers in a hospital. Preventing hospital-acquired infections is especially important for a cancer treatment facility, given that cancer patients are immunocompromised and particularly vulnerable to infections.

This led Apollo Proton Cancer Centre (APCC) to establish an integrated, multidisciplinary program to improve infection prevention in chemoport care. Through this program, APCC sought to eliminate any infections that may occur while handling the chemoport, knowing that concurrent infection due to the chemoport delays recovery, escalates the cost of therapy, and adversely impacts the overall prognosis of the patient. To eliminate hospital-acquired infections due to improper chemoport handling, APCC stepped up the surveillance of patients. Any patient who presents with a fever within 48 hours of insertion of chemoport insertion or handling is suspected to have chemoport infection. If the infection is not explainable by any other foci of infection, then the patient is considered to have a confirmed case of chemoport infection. This allows immediate treatment of hospital-acquired infections. APCC also implemented a rigorous hand hygiene audit and intensified staff training to prevent chemoport infections. The facility also created a separate process flow for chemoport insertion and maintenance helped us achieve zero rates of infection.

APCC is the first and only proton therapy centre in South Asia and Middle East and it is India’s first JCI accredited Cancer hospital. APCC has a fully integrated treatment suite that offers the most advanced treatment in surgical, radiation and medical procedures. True to the Apollo Pillars of Expertise and Excellence, the Centre brings together a powerful team of clinicians renowned globally in cancer care.

Corniche Hospital  
United Arab Emirates

Introduction of the Growth Assessment Protocol (GAP), detecting small for gestation fetuses and reduction of the stillbirth rate

More than forty percent of stillborn infants are considered small for their gestation age. Studies show that early detection and timely delivery is crucial to prevent stillbirths; despite this, the United Arab Emirates (UAE) had no system in place to identify pregnancies that were at higher risk of stillbirths.

To address this gap, the Corniche hospital launched a unique screening tool to identify foetuses which were small for their gestation age, with the goal of preventing stillbirths. Known as the Growth Assessment Protocol (GAP), the system used a customised fetal growth chart which took into account the differences in fetal growth for various maternal ethnicities. This allowed healthcare providers to accurately monitor fetal size and determine whether a pregnancy is at risk of terminating in a stillbirth.

As the first system of its kind in the UAE, developing and implementing the GAP posed special challenges for Corniche Hospital. First, GAP required the collaboration and inputs of experts from various disciplines. Second, a whole new IT system had to be built for this project; a new server had to be identified and built in UAE for fetal growth charts generation as no data can leave the country. Third, the hospital had to provide extensive training to all staff looking after antenatal patients, and most of the training had to be conducted out of hours.

Despite these challenges, Corniche Hospital was able to successfully implement the GAP, resulting in a 40% decrease in the stillborn rate. Similar initiatives are now being rolled out in other facilities in the country, with the goal of collectively lowering the incidence of stillbirths in the region.
Rashid Hospital United Arab Emirates

Patient Integrated Day Case Project

Obtaining elective surgery can be a lengthy and complicated process. Patients often face long waiting times and bureaucratic insurance approval processes, which result in the cancellation of many procedures.

At Rashid Hospital in the United Arab Emirates, hospital management recognized that there were many areas for improvement when it came to the performance of day-case surgeries. For instance, the waiting time to perform elective surgeries stood at 20 days, compared to the ideal waiting time of less than two weeks. As a result, over 20% of elective surgeries were cancelled by patients, against a target of less than 7%. At the same time, the utilization of operation theaters during the prime hours of 7:30 A.M. to 2:30 P.M was just 50%, compared to a target of 70%. These statistics pushed the hospital to adopt a project aimed at improving the performance of its day-case surgery segment. This project sought to improve patient experience and improve operational efficiency on a day-to-day basis. For instance, the hospital implemented measures to ensure that surgeries start on time and are scheduled more efficiently. It also introduced better integration between primary-care services provided in outpatient clinics and hospital inpatient services provided in the day-case unit to ensure optimal pre- and postoperative care. The hospital also redesigned its physical structure: dedicated waiting areas, reception and registration desks were established for day-case patients, and additional beds were introduced to the holding bay to improve patient flow. A counseling room for day-care patients was also created for dedicated post-surgery and post-discharge plan education.

As a result of these initiatives, the average waiting time for elective surgeries was also reduced to just 13 days, while the rate of cancellations dropped to just 6%. These efforts resulted in increased patient satisfaction, reduced the incidence of complaints, and improved the operational efficiency of the hospital.

Emirates Health Services

United Arab Emirates

An AI-driven clinical program for prediction of diabetes disease burden and diabetes management in the northern emirate’s population of UAE

Diabetes management is one of the leading challenges for the healthcare sector in the United Arab Emirates. This is mainly due to the inefficient utilization of available therapies and resources, poor patient adherence, and limited awareness about self-management. As a result, the country has over 1 million individuals suffering from diabetes; this number is forecasted to more than double to 2.2 million by 2040.

Against this backdrop, it is essential to build a comprehensive platform that would provide an evidence-based and data-driven solution to analyze the diabetic population, assess the current socio-economic burden, predict the demand for diabetes-related services, and use artificial intelligence to identify vulnerable populations for early interventions. Hence, the Data and Statistics Department (DSD) of the Emirates Health Services (EHS) developed an Advanced Analytics-driven Diabetes Management Program (AADM) to provide analytical insights on the disease burden of diabetes in the UAE. With the use of artificial intelligence, EHS was able to construct highly accurate models based on large datasets, allowing it to track the prevalence of diabetes across different population groups, demographics, and even various geographic locations.

The program allowed healthcare policymakers to detect trends, and identify high-risk patients. With AADM, healthcare providers were able to obtain security-controlled insights at operational, tactical, and strategic levels. Through the use of scientific modeling technologies, the AADM guides policymakers and healthcare providers in the right direction to reduce preventable lifestyle diseases. It also limits the unnecessary use of high-dosage medications and procedural errors.

The models resulted in the best patient outcomes in the country. EHS became one of the first organizations in the region to apply AI techniques for best healthcare outcomes and diabetes management. The model and its application led to policy recommendations in the EHS hospitals and won national recognition for its contribution to the healthcare sector of UAE.
Cascais Hospital, Portugal

FOCUS - an advanced HIV screening program

The early detection of HIV infection plays a pivotal role in its treatment and prevention. In Portugal, national guidelines state that every adult aged 18 to 65 should be tested for HIV at least once in their lifetime, and more often depending on risk behavior. In practice, however, Portugal has one of Europe's worst statistics when it comes to HIV surveillance, with over half of HIV infections detected late.

To improve these figures, Cascais Hospital launched the FOCUS project, which used an advanced algorithm to increase HIV testing rates in Portugal. Through FOCUS, Cascais Hospital screens all patients who visit the emergency department and automatically offers HIV tests to any adult patient who requests a blood test, and has not had an HIV antibody test in the previous year. Patients are informed of the screening project and are given an opportunity to opt out of the test. Physicians are immediately notified should a positive result be detected, and the patient is informed through the hospital's Linkage to Care team.

Cascais Hospital was the first healthcare institution in Europe to implement the FOCUS project. After three years of implementation, over 38,000 HIV antibody screening tests have been performed, with an opt-out rate of just 5%. The number of late detections dropped to just 39%, while the number of patients who presented with advanced disease dropped to just 22%.

Saudi German Hospital Cairo, Egypt

Establishing an integrated quality management model (holistic approach) in Egypt

A healthcare institution's accreditation does not always reflect the quality of care that a hospital can provide. Hospital accreditation is particularly prominent in Egypt, where some healthcare providers seek to fulfill the requirements of the standard even though it does not truly reflect the quality of care or promote quality patient outcomes.

For the Saudi German Health, accreditation means little if it does not translate to better care and more positive clinical outcome. Therefore, apart from ensuring that the hospital meets the minimum standards laid out in Egypt's accreditation systems, the Saudi German Health also established a holistic institutional model to ensure that it provides quality care at all times. By creating a unified institutional standard, the hospital is also a response to Egypt's fragmented method of providing healthcare.

The hospital's system focuses on providing quality care across the board, rather than focusing on just ticking the boxes of hospital accreditation systems. To achieve this goal, the hospital put various systems in place to ensure that each patient receives the same quality of care. For instance, the hospital has a quality review system that covers clinical standardization, mortalities & morbidities review, complications triggers, clinical audits, medical records documentation, and utilization review, as well as peer review & monitoring of the credentials and privileges of the medical team inside the hospital. The hospital also established a patient experience system designed to monitor the patient's journey inside the hospital to discover how to improve the patient experience. Other initiatives include the use of an effective document control system, a performance improvement system based on key performance indicators, and an enterprise risk management system that covers all risk domains & works on prevention, reduction & mitigation of all types of risks that the hospital may be exposed to.
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