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# Patients

## Empowering Our Patients

# Introduction



## Our Material Matters

- Quality of Care and Patient Stewardship
- Healthcare Digitalisation
- Data Privacy and Security

Our patients are the reason we exist and our number one priority. Across our global network, we strive to provide quality, safe and empathetic care one patient, one family, one touch at a time.

To meet our patients' expectations and to ensure they receive the highest quality of care, we continually engage with them while keeping up with healthcare developments and lifestyle trends. We also regularly review feedback to improve care standards as well as align our sustainability strategies with patients' needs through materiality assessment exercises.

Recognising that our patients have placed a great deal of trust in us, we are resolved to keep delivering better, faster, more accessible and transparent care. We also endeavour to protect sensitive patient data by ensuring that our hospitals, clinics, and laboratories operate in a secure manner.

## Empowering Our Patients

### Quality of Care and Patient Stewardship

At IHH Healthcare we take a Patients First approach, listening to our patients, continuously improving through

training and knowledge sharing, while meeting global standards for excellence.

To ensure that our patients receive the best care and treatment, we stay laser-focused on Quality of Care and Patient Stewardship. To bring clarity to the terms Quality of Care and Patient Stewardship, we have further broken them down into five material matters: Clinical Excellence, Operational Excellence, Service Excellence, Transparency, and Value-Driven Outcomes.

[See page 22 to learn more.](#)

### Healthcare Digitalisation

Patients today demand higher standards of care than ever before. They are also better informed, with a strong desire to take an active role in the management of their own health. All of these are evidenced by the growth of telemedicine, as well as healthcare related apps and technology.

To meet our patients' expectations and to stay aligned with the shift towards preventive medicine, we need to leverage technology to help us enhance care and take service delivery to a new level of convenience and quality.

### Data Privacy and Security

Healthcare is a highly data-intensive business. Any data breach of sensitive patient information would not only erode our patients' trust in us and compromise our reputation, it would, more critically, also affect our ability to deliver quality care.

At IHH Healthcare, we use data for research, innovation, business and operations improvement, business development, and investment purposes, which ultimately helps us save lives and advance medical care.

## Our Goal

To be the most trusted private healthcare provider in all our markets by 2025.

### How We Will Get There

### 2023 Progress Highlights



#### Quality of Care and Patient Stewardship

- Clinical Excellence**  
By providing quality and safe care with highly consistent clinical outcomes for our patients
- Value-Driven Outcomes (VDO)**  
By using data to improve quality and outcomes while ensuring cost effectiveness
- Operational Excellence**  
By delivering quality and seamless patient experience through operational efficiency and improvement projects
- Service Excellence**  
By having a patient-centric service culture to increase patient satisfaction systematically through the use of patient feedback
- Transparency**  
By giving patients peace of mind and helping them feel more prepared, involved and informed

- Comprehensively reviewed our existing 17 clinical quality indicators and undertook a crosswalk analysis to align them with international indicators
- Increased number of VDO quality indicators tracked from 113 to 157 to improve value-based care
- Net Promoter Score increased by up to 10% in our core markets
- Increased billing estimate accuracy from 85% to 87% in Malaysia and Singapore



#### Healthcare Digitalisation

By enabling our patients to enjoy greater accessibility and convenience through innovative partnerships and digital transformation

- Over 7.4 million patients have access to their medical records online
- Established three new innovative partnerships with Annalise, Airdoc, and Intellect



#### Data Privacy and Security

Putting in place stringent safeguards to secure data privacy and bolster security

- Data Protection Officers received training on operationalising ESG and conducting Data Flow Analysis
- Employees trained on in-depth information security topics such as healthcare cyberthreats, managing sensitive information, mobile security, and threat simulations

# Quality of Care and Patient Stewardship

## Our Approach

At IHH Healthcare, we enhance quality of care and patient stewardship through the following focus areas:

### Clinical Excellence

#### What It Means

Providing patients with evidence-based and high-quality clinical care that is guided by compassion and empathy.

#### How We Deliver

We adopt an evidence based, data-driven, and multidisciplinary approach towards achieving superior outcomes for our patients.

- Track and measure clinical performance and outcomes via clinical quality indicators
- Provide continuous training for our healthcare workers
- Invest in new medical technologies and partner with innovative companies to sharpen our in-house precision medicine capabilities
- Adhere to a robust clinical governance framework, which steers the Board and management on clinical quality matters

We also ensure stringent assessment for medical staff and hospitals, while emphasising that nurses and doctors are properly certified and accredited against global benchmarks and accreditation standards including:

- Centers for Disease Control and Prevention (CDC)
- US Centers for Medicare & Medicaid Services
- National Health Service UK

[See development of Clinical Quality Indicators on page 23.](#)

### Operational Excellence

#### What It Means

Improving day to day processes through optimised efficiency and costing.

#### How We Deliver

We emphasise organisational efficiency and productivity by equipping all employees with the requisite knowledge and skills training.

Our training programme leverages Lean Six Sigma training modules to help streamline processes and reduce errors.

### Service Excellence

#### What It Means

Being attentive to the needs of patients and incorporating patient feedback.

#### How We Deliver

We create a patient-centric culture rooted in our service values. This is achieved by actively listening to the voices of our patients through various feedback channels and mechanisms, which we use to identify service improvement projects and action plans.

We diligently track a range of patient satisfaction metrics including Net Promoter Score (NPS) – our ultimate measure of patient satisfaction. We are also working towards establishing country-level NPS benchmarks to better assess our service performance against our peers.

By recognising employees who go the extra mile for our patients, and by conducting regular service training for our staff, we ensure patients feel valued and cared for at every touchpoint.

### Transparency

#### What It Means

Providing healthcare information to patients in an open and respectful way.

#### How We Deliver

We make patients feel more prepared, involved, and informed. Transparency in treatment care and treatment cost is essential to patients. Patients want to know how well they will be treated, the expected outcome of their treatment and the cost of their treatment. We deliver transparent care through:

- Giving our patients peace of mind by offering accurate billing estimates using artificial intelligence
- Providing transparent medical and cost information at the point of decision-making
- Being consistent, transparent and patient-centric in communicating clinical outcomes to patients

### Value-Driven Outcomes (VDO)

#### What It Means

Using data to improve quality and effectiveness while ensuring cost effectiveness.

#### How We Deliver

We optimise the balance between patient outcomes and healthcare costs. VDO is important to our patients because it leads to improved outcomes and care while ensuring cost effectiveness through continual clinician-led improvements. We achieve this through:

- A robust VDO framework to review and analyse data
- Partnering with clinicians to achieve VDO commitments
- Monitoring of VDO indicators to improve value-based care
- Aiming to foster long-term partnerships with insurers and payers to deliver superior patient value

## Clinical Quality Indicators to Improve Patient Care

To identify areas for improvement, we have put in place 17 existing clinical quality indicators (CQIs), which are evidence-based measures of healthcare quality that help us measure and track clinical outcomes in areas such as surgical site infections, hospital-acquired infections, inpatient falls, and management of diabetes and hypertension.

Individual indicators are managed by process owners to ensure managerial responsibility over clinical quality and patient safety.

To mitigate against related risks, we have a clinical risk assurance framework that pre-emptively deals with high-incidence risks through robust risk controls.

In 2023, a Patient Safety Culture Survey was also conducted across the markets. These findings were shared with the various markets to formulate action plans for improving patient safety.

The Patient Safety Culture Survey is a tool by the AHRQ (Agency for Healthcare Research and Quality) used to assess the safety culture within healthcare organisations. It gathers feedback from staff regarding various aspects of patient safety, such as communication, teamwork, leadership, and organisational learning. The survey aims to identify strengths and areas for improvement in patient safety practices, ultimately helping organisations enhance their overall safety culture and improve patient outcomes.

## Our Clinical Quality Indicators are Developed Through a 3-Step Process

Step  
1

### Ensuring the relevancy of identified indicators

Indicators undergo vigorous review to ensure that they are up-to-date, maintain standardised terminology, and align with definitions and measurements which are logical and accurately reflect country differences.

Step  
2

### Stakeholder engagement on implementation of relevant indicators

Stakeholder engagement with healthcare professionals and hospital administrators to ensure CQIs are measured in accordance to standardised definition.

Step  
3

### Review

Post implementation, CQIs are regularly evaluated to determine if they should be included, retained, revised, or retired.

#### Monthly

Results of CQIs are reviewed at both the group and country level

#### Quarterly

Results of CQIs are reviewed at the board level

#### Biennially

All CQIs are relooked at as part of a deep dive to ensure relevancy

## Clinical Risk Assurance Framework

We regularly and systematically assess and refine our CQIs through the development of a clinical risk assurance framework that ensures continuous quality improvement, enhanced patient safety, outcome measurement, transparency, and accountability. This framework covers:

- Ensuring the implementation of current policies and procedures to **uphold clinical quality standards** and **promote patient safety**
- Investigation and implementation of **corrective actions for CQIs** that do not meet expectations
- **Horizon scanning and literature review** of internationally reported CQIs and crosswalk analysis using indicators from countries such as the US, UK, Australia, and Singapore
- **External audits** from the Ministry of Health and other local and international quality assurance bodies

## Enabling Positive Clinical Outcomes Through Value-Driven Outcomes

Since the implementation of our value-driven outcomes (VDO) strategy in Q4 2020, we have already doubled our number of VDO procedures from four to eight. This number reflects the high volume of medical procedures, and conditions of significant health importance that are being handled across IHH Healthcare.

Progressively, we expect more and more countries to be adopting and implementing VDO for the procedures that are applicable to their market.

In terms of figures, we established the baseline for clinical quality indicators (CQI) at 113 in 2022. By 2025, we expect this number to increase two-fold to 226. This is an encouraging trend since the more indicators we have, the more accurately we will be able to track and monitor clinical performance and outcomes.

It is, however, important to note that as we increase the number of indicators, the widened base will also make it more challenging for us to maintain our outcome percentage. Nevertheless, we will continue to push forward to achieve and maintain our target percentage figure of 90% by 2025.

## Peer Learning and Best Practice Sharing

Sharing of key learnings and best practices is crucial for an organisation of our size to achieve excellence in all that we do. At the Group and country level, we actively encourage and facilitate knowledge sharing both across and within our markets. By learning from each other's successes and experiences, we can better improve the efficiency, effectiveness, and performance of the entire organisation.

### IHH Quality Summit

The IHH Quality Summit is an annual flagship event that celebrates our quality journey and milestones, and most importantly, recognises our people who dedicate their lives to the provision of excellent care. The event features presentations from the winning teams on their service and clinical excellence projects.

This year, IHH Healthcare hosted its 8<sup>th</sup> IHH Quality Summit. The two-day event saw delegates from across the IHH global network gather physically to discuss about the theme of "Future of Care". In addition to our employees, academics, and industry experts were also present to share their learnings and insights on how medical innovation and improvements can enhance the entire patient experience.

The Summit also hosted for the first time, the third IHH Medical Symposium. The Symposium gathered physicians and surgeons to share insights on cutting-edge treatments, personalised care, and innovative research in cancer therapy.

[Read more about the IHH Quality Summit 2023 on page 29.](#)

### Central Quality Improvement Forum (CQIF)

Every month, we run CQIF with country CEOs and medical affairs leads across all our markets. This forum helps us communicate information on quality issues and share best practices.

### Customer Experience Leadership Meeting

Regular customer experience meetings are conducted by all business units and markets. At the Group level, we organise bimonthly collaborative learning sessions, set service standards, and identify opportunities and initiatives to improve patient experience.

### Value-Driven Care Meetings

Each business unit and market conduct regular value-driven care meetings. At the Group level, we organise quarterly collaboration sessions to learn from each other, share results, and identify areas to improve outcomes and cost effectiveness.



### Our VDO Roadmap

	2020	2021	2022	2023	2024	Target 2025
Procedures	4		8			
Indicators		73	113	157	To be determined	226
Outcomes		96.1%	94.3%	95.7%		90%

### Our Progress in 2023

We made great strides in improving **value-driven outcomes** by maintaining the outcome percentage above 90% despite a 39% increase in indicator base.

[Refer to page 24 for an in-depth look into our VDO efforts.](#)

Through our commitment to **transparency**, we have improved billing estimate accuracy in several markets including Singapore and Malaysia. Our hospitals in India and Türkiye conducted technical evaluations of billing estimate tool for future implementation.

In terms of **operational excellence**, we have focused on establishing a robust framework to accurately measure and report on progress towards our goal of having 100% of A&E cases to be admitted within one hour of doctors' instructions in our core markets by 2025. In 2023, we established the baseline for this metric at 54.6%.

In terms of **service excellence**, we saw an overall increase in Net Promoter Score by up to 10% across our core markets. We appointed a third party survey company to conduct NPS benchmarks for our core markets. Results for NPS will be available from 2024, starting with Singapore.



### Targets and Metrics<sup>1</sup>

Targets	Metrics	2022	2023
<b>Achieve 90% of Value-Driven Outcomes (VDO) at or above international benchmarks<sup>1</sup> for 226 indicators<sup>2</sup> across 8 VDO procedures by 2025</b>	Percentage of value-driven outcomes at or above international benchmarks	Established baseline of 94.3% for 113 outcome indicators <sup>3</sup>	Achieved 95.7% for 157 outcome indicators <sup>3</sup>
<b>Billing estimates to be 90% accurate in our core markets<sup>4</sup> by 2025</b>	Percentage of billing estimate accuracy <sup>5</sup> in our core markets	85% in Malaysia and Singapore	Increased to 87% in Malaysia and Singapore
<b>Admission for A&amp;E cases to be within one hour of doctors' instructions in our core markets<sup>4</sup> by 2025</b>	Percentage of A&E admissions achieved within one hour of doctors' instructions in our core markets	Put in place plans to establish baseline in 2023	Baseline established at 54.6%
<b>Be in the top quartile in Net Promoter Score<sup>6</sup> (NPS) in our core markets<sup>4</sup> by 2025</b>	Number of core markets in top quartile of NPS	Establishing country benchmarks against other healthcare providers	Appointed a third party survey company to establish NPS benchmarks



<sup>1</sup> International benchmarks are derived from published medical literature in peer-reviewed journals.  
<sup>2</sup> Projected 226 indicators based on country capability to collect relevant data.  
<sup>3</sup> Based on VDO procedures that business units have currently implemented.  
<sup>4</sup> Our core markets refer to Malaysia, Singapore, India, and Türkiye.  
<sup>5</sup> Accuracy rate based on percentage of elective surgical admissions with matching procedures, length of stay (equal or less), and bed type (equal value or less), and within the upper bound of bill estimate.  
<sup>6</sup> NPS is a widely used market research metric that is based on a single survey question asking respondents to rate the likelihood that they would recommend a company, product, or service to a friend or colleague.

## Highlights

Our journey towards excellence in quality care and patient stewardship requires us to continually drive improvements in processes, introduce cutting-edge therapies to better treat medical conditions, increase value for our patients, and invest in game-changing medical innovation and technology.

2023 was an exciting year for us with many highlights. We continued to push the boundaries with complex surgeries including the removal of two mirror-image brain tumours in Gleneagles HealthCity Chennai and achieved 800 liver, intestines, and pancreas transplants for Gleneagles Hospital Mumbai. We also opened numerous new medical facilities.

Here are some of the highlights in 2023 that showcase our commitment towards quality care and patient stewardship.

## Exciting Expansions at IHH Healthcare

2023 saw us continuing our mission to deliver more high-quality care through expansions of our facilities and capabilities across our various markets.



### New S\$78 Million Proton Therapy Centre at Mt Elizabeth Novena Hospital

After five years in the planning, we officially launched the highly-anticipated Proton Therapy Centre at Mount Elizabeth Novena Hospital. The S\$78 million state-of-the-art facility is the first such facility among private hospitals in Southeast Asia. This is IHH Healthcare's largest single investment in medical technology, representing our commitment to providing the best possible care for our patients.

Proton therapy, which utilises proton beams to destroy cancerous cells, is a painless and precise method for targeting complex tumours. The technology allows doctors to target specific areas more precisely, which lessens the impact on healthy tissue, resulting in fewer associated side effects compared to conventional radiation therapy. With this new centre, we will not only be able to provide hope for patients and their families, but also improve patients' quality of life, during and after treatment.



### New High-Quality Refractory Cancer Centre at Parkway Shanghai Hospital

Through a strategic partnership with Professor Ding Gang, China's leading oncologist from Xuanhe Medical Group, we launched the Parkway International Refractory Oncology Consultation Center at Parkway Shanghai Hospital. By unifying the unique expertise and resources of both our healthcare organisations, cancer patients can now benefit from better oncology diagnosis and treatment.

What makes the launch of this new centre especially significant is the fact that refractory cancer, which refers to cancers resistant to standard treatment, represents a segment in the private healthcare space that has huge potential.

This new development signals a great start to IHH China's plans to innovate clinical practices, foster multidisciplinary cooperation, and prioritise holistic patient care to improve outcomes for cancer patients in Shanghai and beyond.



### New Gynaecology Oncology Centre at Gleneagles Hospital Hong Kong

Gynaecology Oncology Centre at Gleneagles Hospital Hong Kong is a landmark treatment facility that offers gynaecological cancer patients a new level of precise and personalised diagnostic and treatment.

This precision comes in the form of a state-of-the-art robotic and endoscopic system that enhances surgical precision, reduces blood loss and postoperative pain, and facilitates faster recovery.

The facility also offers highly personalised and comprehensive treatment options made possible by their world-class multi-disciplinary team. This team is supported by the Gynaecological Oncology Tumour Board, which discusses every patient case to ensure that the best and most effective targeted care is provided.

### First Veno-Venous Extracorporeal Membrane Oxygenation Treatment in Sabah, Malaysia

Gleneagles Hospital Kota Kinabalu is the first hospital in Sabah to conduct a Veno-Venous Extracorporeal Membrane Oxygenation treatment (VV ECMO).

VV ECMO is a modified heart-lung bypass machine used in patients with life-threatening respiratory failure who are not responsive to conventional mechanical ventilation support and therapy. During VV ECMO treatment, the ECMO machine takes over the function of the lungs and provides time for the lungs to rest and recover.



### A New Lease of Life through 'Robot' Therapy in Istanbul

Due to severe back pain, 67-year-old Kuwaiti patient Roqaya S Wojdni had to undergo herniated disc surgery four times in 13 years. But her last operation left her unable to walk and completely bedridden. Left with mobility in a few toes, Wojdni felt devastated and had started to lose hope of being able to move independently again.

The medical team at Acıbadem Taksim Hospital used robotic rehabilitation technology to help Wojdni regain her mobility independence. Physical Therapy and Rehabilitation Specialist Assoc. Prof. Dr. Mustafa Çorum said the medical team decided to switch to robotic rehabilitation therapy after three months of physiotherapy yielded little improvement in Wojdni's walking and muscle strength.

Through a combination of using robotic devices, electrotherapy, fitness cycling, standing walking exercises, and physiotherapy for a total of four to five hours a day, Wojdni saw rapid progress in her recovery journey; starting with walk-with-assistance within two months and has since fully regained her mobility independence.



### India's First Complex Brain Surgery

Gleneagles HealthCity Chennai successfully performed India's first complex brain surgery and set a new standard in medical excellence.

Over 10 hours, with exceptional expertise and support from the latest cutting-edge technology, the surgical team performed a challenging excision of two mirror-image tumors that affected vision, from the brain of a 38-year-old patient. The patient has since recovered, retaining about 80% to 90% of his vision in both eyes and free from complications.

This medical triumph exemplifies our team's dedication and commitment to clinical excellence and pioneering healthcare solutions to deliver groundbreaking care for our patients.





## Gleneagles Hospital Mumbai Completes 800 Organ Transplants



Gleneagles Hospital Mumbai made the news when it became the first hospital in Western India to achieve 800 liver, pancreas, and intestine transplants. In addition to this, it has also performed over 600 solid organ transplants for the kidney, heart, lungs and hand.

This record-fee established Gleneagles Hospital as the region's foremost multi-organ transplant centre. As the largest and most comprehensive facility of its kind in the region, Gleneagles Hospital has been setting the standard for excellence in numerous transplant procedures, including Living Donor (Adult, Paediatric, Auxiliary, Dual Lobe and ABO-incompatible), Cadaver, Laparoscopic, and Robotic Transplant.

Underpinning the success of Gleneagles Hospital is a team of dedicated medical professionals who recognise the value of collaboration, as well as the need to keep pushing the boundaries of medical science to provide the best possible care. Supported by the latest medical facilities and advanced surgical systems, they provide patients with a renewed hope to overcome their illness and continue living life to the fullest.

## "Passionately Caring" at IHH Service Week 2023



Held from 24 to 28 April, the 2023 IHH Service Week exemplifies our culture of service excellence in everything we do and for every patient we care for.

As a healthcare provider that advocates *Care. For Good.*, we recognise the importance of bringing empathy to life at scale so that we can leave a lasting impact on our patients. That was why the key conversation at the IHH Service Week 2023 was themed "Passionately Caring".

With *Patients First* being one of our core values, Service Week serves as a platform to acknowledge and celebrate the exemplary service and care our people provide to our patients and their loved ones every single day as we reaffirm our commitment to service excellence.

Over the course of the week, Service Week Committees across the business units put together creative presentations that highlighted inspirational acts of service. The keynote address on "Operationalising Empathy" also struck a chord with leaders and staff across the IHH network, who gained practical insights into embedding empathy within our patient journeys.

## IHH Quality Summit 2023

2023 saw IHH Healthcare hosting its eighth Quality Summit in Singapore. Themed The Future of Care, the two-day event united 500 delegates from IHH's network of 80 hospitals across 10 countries, to explore the challenges and opportunities that shape the healthcare sector.

On the first day, attendees were treated to sharing sessions by academics and industry experts on how innovation and improvements to the delivery and quality of care can enhance the patient experience. These learnings were then brought to life as delegates went on site visits to Jewel Changi Airport and the Centre for Healthcare Innovation on the second day of the Summit. These visits gave them a first-hand experience of what it takes to build a culture of service excellence and at the same time witness how innovation can be used to improve productivity and patient experience.

For the first time, the third IHH Medical Symposium was held in conjunction with the Summit. The Symposium gathered physicians and surgeons to share insights on cutting-edge treatments, personalised care, and innovative research in cancer therapy. Clinicians also had the opportunity to visit the Proton Therapy Centre at Mount Elizabeth Novena Hospital. The state-of-the-art facility is IHH's single largest investment in medical technology and offers one of the most advanced forms of precision cancer treatments.

In recognition of our staffs' tenacity and drive to deliver the best service and care for our patients, the IHH Quality awards were also presented during the Summit. These accolades serve as a testament to our unwavering commitment to excellence, pushing the boundaries of what is possible in the field of healthcare as we journey on to Care. For Good.



## Enhancements to Our Lean Six Sigma Training



In 2023, we made enhancements to our Lean Six Sigma training programme. For our Yellow Belt course, we added a total of five new modules, with a focus on more complex tools.

We also started providing the more advanced Green Belt training course to more than 350 staff across the group, including the pioneer batch of staff leaders from our operations in India.

Several improvement projects were also identified in 2023, most notably with regards to the "accident and emergency 1-hour admission" initiative. To date, our Lean Six Sigma training initiatives have benefited more than 10,000 staff across the group.

## Providing Greater Peace of Mind Through Transparency



We successfully deployed FeeAdvisor.ai in Singapore, Malaysia, and Hong Kong to provide more accurate bill estimates.

Extending across three of our markets, FeeAdvisor.ai has shown itself to be adaptable and effective across diverse healthcare environments.

So far, FeeAdvisor.ai has demonstrated a high accuracy rate of over 75% on elective surgeries. This high rate enhances transparency and fosters trust between IHH and our patients, by empowering the latter to plan their finances more effectively.

To complement FeeAdvisor.ai, we have also launched PackageOptimiser.ai which optimises healthcare package design, allowing for creation of tailored healthcare packages that meet the specific needs of patients, ultimately leading to a more efficient and effective healthcare system.

## Looking Ahead

When it comes to improving the quality of care for patients, there's always more to be done.

In our relentless pursuit of **clinical excellence**, we will continuously review our clinical quality indicators to ensure they are relevant and appropriately benchmarked.

To further boost **value-driven outcomes** for our patients, we will continue to expand the scope of value-driven outcomes programmes to include more procedures and treatments.

To inspire our people towards **service excellence**, we will continue to equip our leaders with the skills and knowledge necessary to lead and inspire their teams to service excellence. We will also continue to use patient feedback to initiate projects to improve patient experience.

As part of our aim to increase **transparency** on outcomes and costs, we will continue to invest in technology that can provide our patients with data to make more informed decisions relating to their treatments.

**Operational excellence** is a perpetual pursuit which involves fostering a culture of continuous improvement. To this end, we are building up a critical mass of internal Lean Six Sigma experts to ensure that improvement initiatives are effective and sustainable.

We will continue to train staff leaders in advanced Lean Six Sigma methodologies, and enhance the general Lean Six Sigma e-Learning platform for the general staff population. At the Group level, we will continue to develop Target Operating Models and ensure their spread across our key markets, in the core domains of A&E, Operating Theatres, and Bed Management.

In 2024, we will also be welcoming NurseShift.ai, an AI-powered workforce optimiser that seeks to transform nurse scheduling to prioritise patient care. Beginning with the Singapore market, NurseShift.ai will, progressively, amplify operational efficiencies across the entire IHH Healthcare landscape.

Even as we strive to achieve new heights of excellence, we are equally mindful about strengthening the relationships with our patients. Hence, we will continue to leverage our assets – our people, size, and network to further enhance our position as a trusted global healthcare provider.

# Healthcare Digitalisation

## Our Approach

We seek to continually improve our digital capabilities to provide our patients with greater convenience, accessibility, and value for all of their health needs.

Our strategy for digital transformation revolves around deepening our in-house capabilities to enhance our

hospital operations and patient services, as well as building strategic partnerships and investments with innovative companies to expand service offerings.

To ensure the success of our ongoing digital transformation, we have categorised our focus areas into the following three pillars:



### Technology-Driven Quality of Care

Digitalisation enables our hospitals to run more efficiently, leading to enhanced operational efficiencies, reduced waiting time, and improved healthcare decision-making by clinicians. It also provides a more seamless online to offline experience for our patients, while enhancing the way we manage data across internal and external systems.

[See how our proprietary in-house Hospital Information System/Electronic Medical Record \(HIS/EMR\) – Cerebral Plus \(C+\) – is enhancing quality of care on page 32.](#)



### Patient Engagement and Empowerment

Across all our markets, we are embracing digitalisation to meet the evolving needs of our patients. These innovations allow our patients to enjoy personalised, holistic, and cost-effective care. Digitalisation also empowers patients to be more involved in managing their own health, as well as improves transparency, thereby strengthening trust between us and our patients.

[Read more about IHH Healthcare's digital healthcare apps on page 34.](#)



### Intelligence Mining

Gathering and converting data into insights allow us to drive operational and clinical excellence, support patient volume growth, and build new businesses. As such, we will continue to come up with new intelligence mining initiatives.



## Our Progress in 2023

### Healthcare Digitalisation

- 1. Cerebral Plus (C+)** – In August 2023, Gleneagles Hospital Singapore started using the C+ electronic medical record (EMR) module with the plan to eventually replace the legacy EMR system. C+ is our proprietary in-house Hospital Information System/Electronic Medical Record (HIS/EMR) solution used in Acibadem hospitals in Türkiye, and Gleneagles and Pantai hospitals in Malaysia. Best practices and knowledge across IHH countries can be incorporated into C+ and deployed into each country for the benefit of our patients who can enjoy a seamless experience from arrival to discharge.
- 2. MyHealth360** – The MyHealth360 app and web portal in Malaysia, based on the same platform as Acibadem Online and integrated with C+, was first piloted in Gleneagles Kuala Lumpur Hospital in 2022. It has been progressively rolled out to hospitals across the IHH Healthcare Malaysia network. By the end of 2023, patients from 14 out of 16 of our hospitals in Malaysia have access to their health data via MyHealth360.
- 3. TELIS and Project Tuntas** – Premier Integrated Labs (PIL) in Malaysia kicked off two exciting new initiatives. The first, TELIS, is a laboratory information system that helps PIL's 30 laboratories improve operational efficiency and optimise their lab processes. The second, Project Tuntas, is an e-ordering platform that helps doctors and clinics outside our hospital premises streamline and improve the way they order lab tests.

### Innovative Partnerships and Investments

- 1. Intellect** – IHH Healthcare became digital mental health company Intellect's first strategic healthcare investor. Intellect offers end-to-end digital mental health and wellness services ranging from cognitive behavioural therapy content to coaching to clinical therapy.

This partnership paves the way for IHH Healthcare to deliver holistic care and extend its continuum of care to include both mental and physical health, ultimately building a seamless healthcare ecosystem for the millions of people who require support and care.

As part of a pilot initiative, maternity patients from Gleneagles Hospital Singapore have access to the Intellect content and coaching, to help them obtain mental health support as they navigate the post-partum journey.

- 2. Us2.ai** – In 2022, we invested in Us2.ai, an AI-based echocardiography software that uses machine learning to deliver faster and more accurate cardiac measurements. In 2023, Us2.ai was launched in Malaysia and Hong Kong.



### Targets and Metrics

Targets	Metrics	2022	2023
Increase the number of patients who have access to their medical records online	Number of our patients who have access to their medical records online	6.5 million	7.49 million



## Highlights

### Leveraging Partnerships to Deliver Greater Value to Stakeholders

As part of our mission to continually enhance patient experience and improve clinical outcomes, we forge partnerships with innovative and like-minded companies who desire to make a real difference in changing the landscape of healthcare.

#### New Partnerships Formed in 2023



**Annalise** – An AI-based imaging platform that helps address radiology imaging challenges based on volume and criticality, giving clinicians vital support to act decisively with peace of mind.



**Airdoc** – Airdoc Technology is the company behind the recently-launched Artificial Intelligence Retinal Image Analysis which is able to screen up to 35 retinal diseases, as well as provide health assessments for various chronic diseases.



**Intellect** – We became the first strategic healthcare investor in digital mental health company, Intellect, which offers end-to-end mental health services via their Intellect platform and in-person at their clinic.

#### Ongoing Partnerships



**DA** – Our ongoing investment in and collaboration with regional digital healthcare platform Doctor Anywhere enables us to provide more cost-effective, convenient and seamless care to our patients.



**Lucence** – Through our investment in precision oncology company Lucence Health, we are able to provide our patients with access to cutting-edge cancer diagnostics tools.



**US2.AI** – Our investment with Us2.ai, which develops AI-based echocardiography software, helps us to provide better and faster treatment to our heart patients.

### Receiving Validation Through Awards and Accolades

While awards and accolades are not the driving force for us to improve patient care, they play an important role in affirming that we are on the right track and that our digitalisation efforts are in line with international best practices.



#### Healthcare Asia MedTech Awards –

In 2023, we scored our first win at Healthcare Asia MedTech Awards for Singapore's MyHealth360 platform.



#### World's Best Hospitals –

Newsweek ranked Gleneagles Hospital Singapore and Mount Elizabeth Hospital Singapore as among 2023's World's Best Specialised Hospitals and World's Best Smart Hospitals respectively.



#### Tech Brands Turkey –

Acibadem Healthcare Group was ranked first in Healthcare sector.

### Parkway Radiology Launches First A.I. powered Digital Radiology Ordering Platform to Enhance Clinic and Patient Convenience

Parkway Radiology, a division under IHH Singapore, in collaboration with the local health technology startup Bot MD, introduced its inaugural Digital Radiology Ordering platform in 2023.

This innovative system facilitates IHH Singapore hospitals and clinics in scheduling radiology exams without the need to contact the Parkway call centre.



The Digital Parkway Radiology Ordering system enables instantaneous and real-time appointment scheduling across all of Parkway Radiology Centres. Clinics now have the capability to reserve appointments for various exams such as MRI, CT, X-Ray, Mammogram, Ultrasound, and more. Following each new booking, Bot MD promptly dispatches a confirmation message, complete with a digital radiology order form and preparation instructions for the upcoming exam, directly to patients via WhatsApp.

Furthermore, clinics can effortlessly modify or cancel exam bookings online, eliminating the need to contact the Radiology call centre. Bot MD plays a crucial role by instantly informing the clinic and the attending doctor when a radiology report and scan are ready for viewing. Additionally, doctors and clinic staff can utilise Bot MD to inquire about information pertaining to Parkway's Radiology test catalogue, as well as obtain preparation instructions for various radiology exams.

The utilisation of the new Digital Radiology Ordering system has witnessed substantial growth in 2023, with over 8,000 radiology orders processed on the platform to date. Patients have expressed positive feedback, highlighting the convenience of receiving appointment reminders and exam preparation information seamlessly through WhatsApp.

## Acibadem Command Center Launched in Türkiye



This past year, Acibadem Healthcare Group and GE Healthcare signed a partnership agreement to bring GE's Command Center solution to Türkiye. This is the first real-time clinical command centre to be established in Türkiye, offering real-time analysis in healthcare, and enabling the orchestration of patient care through actionable information accessible everywhere.

The solution works by building on C+ as a foundation and augmenting it with data from various digital applications to provide leaders and caregivers with actionable insights for decision-making, problem-solving, and forward planning.

Acibadem Command Center, which is situated at the group's Ataşehir Hospital in Istanbul, will also serve and manage the clinical and operational processes of the other Acibadem hospitals in Istanbul.

The implementation of this innovative platform will provide Acibadem hospitals in Istanbul with an enterprise-level, 360-degree view of all their services. With this enhanced operational overview, it is envisioned that hospitals will be able to reduce the overall length of stay of patients, while at the same time increase their comfort during hospital stays.

## IHH Healthcare's Suite of Digital Healthcare Apps

As part of IHH Healthcare's commitment towards enhancing patients' accessibility to their healthcare records and services, we have been introducing relevant healthcare apps for our different markets. These include MyHealth360 in Malaysia and Singapore, Acibadem Online in Türkiye and My Gleneagles SmartHealth in Hong Kong.

The common benefits of these apps include easier access to our hospitals, doctors, and services.



Available in Malaysia and Singapore



Available in Türkiye and Europe



Available in Hong Kong

### MyHealth360: Empowering Our Patients

The MyHealth360 mobile app bridges online and offline care so that our patients can take charge of their health and well-being on a single platform, offering convenience and personalised services securely.

With MyHealth360, patients in Malaysia and Singapore can have instant access to their medical records, enjoy speedy appointment booking, view itemised bills, among many other benefits.

An additional feature launched since mid-2023 in the MyHealth360 Singapore app is the ability to for patients to access Radiology's diagnostic quality images (e.g., x-rays, CT scans and MRI scans) – in addition to health reports – over the app.

This contributes to reduced wait time as patients no longer have to wait for hardcopy radiology reports and images to be couriered physically. Additionally, patients can also help to lessen environmental impact by sharing reports and images online.

## Looking Ahead

The nature of digital transformation is that it is dynamic and ever-changing. This means that we need to stay on our toes, keeping track of the latest trends and technological developments that can help us in our journey to improve patient care.

Even though we have made significant progress in introducing digitalisation and integrating innovation at IHH Healthcare, we need to continue pushing forward to positively impact healthcare in our existing markets and beyond.

A distinct advantage that we have as a healthcare network that spreads across 10 countries is that we can take the knowledge that we have gained in one market to benefit our other markets.

We will continue to enhance C+ using experience from across IHH. In the coming year, we intend to expand the use of C+ in Malaysia to include the Electronic Medical Record (EMR) module. At the same time, TELIS and Project Tuntas which has already been kicked off at Malaysia Premier Integrated Labs, will now be introduced to Singapore's Parkway Laboratories.

To ensure that our apps (MyHealth360, Acibadem Online, and My Gleneagles SmartHealth) continue to empower and make quality healthcare more accessible to our patients, we will keep upgrading them with new features and functionalities such as the inclusion of AI and Bot related tools. We will also further enhance our apps to include more customised and personalised experiences through Customer Relationship Management and consent management.

No matter what lies ahead, we are ready to shape the future of healthcare by fully embracing digitalisation and innovation.

# Data Privacy and Security

## Our Approach

We take cybersecurity and patient confidentiality seriously and have put in place stringent Data Privacy and Security measures. To ensure the effectiveness of these measures, we have adopted a strategy that is represented by the following three pillars:



### Strength in Internal Mechanisms

To protect the smooth running of our operations, we leverage cyber defence software and hardware, conduct frequent tests through our internal assurance and verification programme, and implement data protection risk and incident response management processes.

A key highlight of our cyber security system is our Central Security Operations Centre which oversees our defence technologies and monitors our IT systems to quickly detect and isolate hacking attempts.



### Regular Data Privacy and Cybersecurity Training

We conduct targeted Data Privacy and Cyber Security trainings to keep our employees prepared for situations relevant to their scope of work. In addition to imparting theoretical knowledge, our training also consists of breach simulation and cyber crisis response exercises.



### Guided by International Frameworks

To ensure we are ready to handle and respond to all levels of security threats in protecting data, we align ourselves with international cybersecurity standards and frameworks, many of which help organisations such as IHH Healthcare meet data protection requirements. These include:

- **ISO27001:2013** – The international standard for information security that sets out the specifications for an Information Security Management System (ISMS) to manage risks related to the security of data
- **MITRE ATT&CK** – a globally-accessible knowledge base of adversary tactics and techniques based on real-world observation
- **National Institute of Standards and Technology (NIST)** – A cybersecurity framework specifically created for healthcare institutions to reduce cyber risk

## Our Progress in 2023

As a leading healthcare provider, we endeavour not only to ensure the proper handling of patient data but also to build trust in our capability to safeguard data.

Over the past year, we conceptualised a data transfer legal framework within IHH Healthcare to better govern cross-border transfer of personal data. We also started analysing data flow to improve the way we account for processing of personal data.

To bolster our cybersecurity, we developed a more intuitive and inclusive platform that enables us to conduct deeper and more specific cybersecurity awareness training. We also increased security coverage of our assets and environments by adopting more proactive solutions for enhanced monitoring and early detection.

## Metrics

Metrics	2022	2023
Number of substantiated complaints concerning breach of customer privacy and loss of patient data	NIL	NIL





## Highlights

### Gleneagles Hospital Hong Kong received Privacy-Friendly Awards 2023



In 2023, Gleneagles Hospital Hong Kong was one of only eight organisations to receive the prestigious Gold Award at Privacy-Friendly Awards.

Organised by the Office of the Privacy Commissioner for Personal Data, Hong Kong (PCPD), Privacy-Friendly Awards was first introduced in 2021 to recognise efforts made by organisations in protecting personal data privacy.

The Gold Award received by Gleneagles Hospital Hong Kong is the highest award type. It signifies that the hospital has in place all five of the privacy protection measures identified by the awards committee as crucial for ensuring personal data privacy.

### Inaugural CyberSmart October Campaign



In conjunction with National CyberSecurity Awareness Month, IHH Healthcare Singapore launched its first-ever CyberSmart October Campaign.

The campaign kicked off with a seminar conducted by the Singapore Police Force's Anti-Scam Investigation Branch, which covered useful facts and case studies of scams in Singapore, as well as ways in which individuals and organisations can be better protected against personal scams and cyberattacks.

As part of the month-long campaign, cyber wellness roadshows were also organised at various IHH Healthcare hospitals and offices around Singapore. These roadshows served as a good reminder to the organisation that as a healthcare provider we are a prime target, and that cybersecurity should not be taken for granted no matter how well-protected we think we are. It also reinforced the need to continue prioritising cyber risks as an important business risk and adhere to good cyber hygiene practices.

## Looking Ahead

We will continue to take a proactive stance in managing data privacy and security. This means going beyond compliance to actively ensuring that our safeguards are adequate to mitigate ever-evolving risks.

As part of our commitment to keep pace with industry data protection standards, we are working towards substantially aligning ourselves with international data privacy credentialing such as the APEC Cross-Border Privacy Rules system.

Our goal moving forward is to also reinforce our Personal Data Protection Policy across the IHH Healthcare Group. To do this, we aim to induct more supporting data protection personnel, as well as provide continuing support for appointed Data Protection Officers to upskill themselves with data privacy proficiency accreditations.

We will also continue to exercise vigilance by refreshing and strengthening our cybersecurity framework. This means increasing the coverage, depth (in terms of test cases) and frequency of our IT security assessment exercises, as well as keeping our security policies across the group aligned with ISO27001 principles.

To prepare for any potential cyber threats, we will work closely with communities to ensure that we get relevant and timely intelligence to address attacks before they happen. We will also endeavour to strengthen our Group-wide Cyber Centre of Excellence by adopting new and relevant technologies that can help us address the dynamically changing threat landscape.

# Patients Scorecard

Quality of Care and Patient Stewardship	FY2022	FY2023
Percentage of Value-Driven Outcomes (VDO) at or above international benchmarks <sup>1</sup>	Established baseline of 94.3% for 113 outcome indicators across 8 VDO procedures <sup>2</sup>	Achieved 95.7% for 157 outcome indicators across 8 VDO procedures
Percentage of billing estimate accuracy <sup>3</sup> in our core markets <sup>4</sup>	85% in Malaysia and Singapore	Increased to 87% in Malaysia and Singapore
Percentage of A&E admissions achieved within one hour of doctors' instructions in our core markets <sup>4</sup>	Put in place plans to establish baseline in 2023	Baseline established at 54.6%
Number of core markets <sup>4</sup> in top quartile of NPS	Establishing country benchmarks against other healthcare providers	Appointed a third party survey company to establish NPS benchmarks

Healthcare Digitalisation	FY2022	FY2023
Number of our patients who have access to their medical records online	6.5 million	7.49 million

  

Data Privacy and Security	FY2022	FY2023
Number of substantiated complaints concerning breach of customer privacy and loss of patient data	Nil	Nil

<sup>1</sup> International benchmarks are derived from published medical literature in peer-reviewed journals.

<sup>2</sup> Based on VDO procedures that BUs have currently implemented.

<sup>3</sup> Baselined bill estimate accuracy rate for our hospitals in Singapore and Malaysia. Accuracy rate based on percentage of elective surgical admissions with matching procedures, length of stay (equal or less), and bed type (equal value or less), and within the upper bound of bill estimate.

<sup>4</sup> Our core markets refer to Malaysia, Singapore, India, and Türkiye.