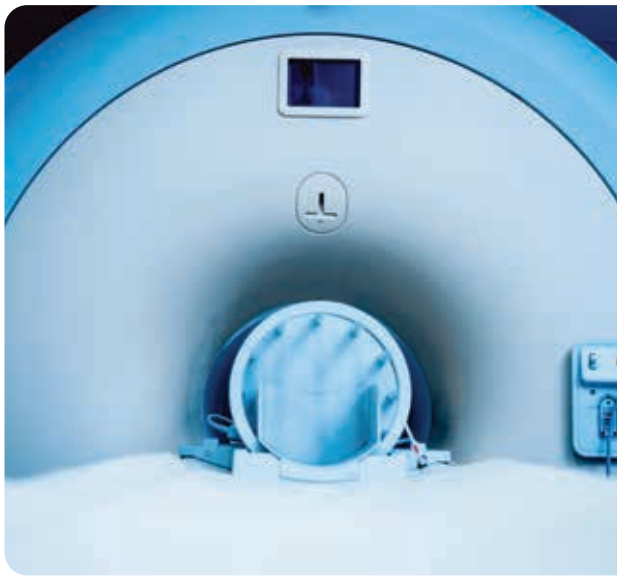
Life Healthcare

SOUTHERN AFRICA QUALITY REVIEW 2010 – 2020



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10-YEAR QUALITY IMPROVEMENT HIGHLIGHTS

MAKING LIFE BETTER FOR OUR PATIENTS

2015

We launched the CARE programme which encourages employees to be more mindful in delivering the quality of care they would like for themselves and their families.

2015

The Group adopted a formal client relationship management system.

2018

We launched the Major Joints for Life programme, a multi-disciplinary approach to hip or knee arthroplasty surgery, providing patients with improved clinical treatment.

2020

Our specialised COVID-19 rehabilitation programme improves patients' quality of life during the COVID-19 recovery process, providing patients with improved clinical treatment.

Joining forces with committed doctors

In 2009 we established the clinical directorate, to achieve the best clinical outcomes.

Improving clinical outcomes

We have established eight clinical review panels consisting of doctors and specialists from a range of disciplines, to develop and share data regarding clinical outcomes.

QMS

To deliver quality outcomes for patients, we developed our interactive and robust quality management system in 2010. It complies with ISO 9001:2015 revised standard and the National Department of Health standards.

Leading transparent reporting

- In 2018 we became the first private hospital group in South Africa to publish our hospital quality scores on our website, on a per-hospital basis
- We were first to report mental health outcomes
- We also publish real-time patient experience scores on the website. www.lifehealthcare.co.za

MAKING LIFE BETTER FOR OUR PEOPLE

Decrease in employee adverse events from **7.10** to **4.06** per 200 000 labour hours over 10 years.

2020

We developed a COVID-19 employee tracker to record the number of our employees infected and their recovery.

Decrease in annual turnover rate of pharmacists from **27.7%** in 2010 to **8.0%** in 2020.

12 133

nurses trained from 2011 to 2020.

Taking employee health and safety seriously – health and safety committee provides the platform for the voice of the employee to be heard.

GROWING OUR CONTRIBUTION TO HEALTHCARE IN SOUTH AFRICA

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Healthcare facilities	58	63	63	61	63	64	65	66	66	**66**
Registered beds	7 916	8 227	8 279	8 418	8 647	8 768	8 983	9 055	9 136	**9 151**
Permanent and temporary employees		14 585	14 622	15 247	15 467	15 375	15 560	15 841	16 376	**15 992**
Specialists and healthcare professionals						2 850	2 934	2 985	3 800	**3 630**

10-YEAR QUALITY IMPROVEMENT HIGHLIGHTS

CLINICAL PHARMACY FOR QUALITY OUTCOMES

Our national clinical pharmacy footprint supports the multi-disciplinary team to align pharmacotherapy with evidence-based best practice.

Our pharmacists have presented at South African Society of Clinical Pharmacy conferences since 2015. In 2020, Life Healthcare achieved:

Best poster presentation

Best case presentation

Best podium presentation

Young up-and-coming clinical pharmacist of the year

The ICNet ABX programme combines admission-, clinical coding-, dispensing- and pathology- data to serve as a comprehensive clinical decision support system for pharmacists.

2014 & 2015

Life Healthcare partnered with Nelson Mandela University to run a clinical practice pharmacist certificate course.

LIFE COLLEGE OF LEARNING

2012
Registered as a Private Higher Education Institution.

2012
Introduced regional, annual research days.

2015
Established regional research committees.

2015
Enhanced learning centres with computer and simulation laboratories and real-life models.

Became the first Private Higher Education Institution accredited by the National Health Research Ethics Committee in 2018.

FOREWORD

A decade of commitment to quality

Quality is one of Life Healthcare's key strategic pillars and continually improving the safety and quality of care is core to the way we work. Striving to consistently improve patient outcomes, enhance the patient experience and work closely with our doctors has been, and remains at the epicentre of our business, as evidenced in this 10-year Quality Review.

The quality improvement journey is the progressive, incremental improvement of clinical processes, safety, and patient care. Sometimes this improvement is "breakthrough" in nature, but more often is a gradual process resulting from the constant questions: "How are we doing?" and "What can we do better?"

It is an iterative process, where improvements are made, the effect of the improvements are measured, and the process, supported by systems and training, is repeated until the desired outcome is achieved. This 10-year Quality Review sets out the framework and structures that underpin the quality improvement journey in Life Healthcare, as well as our many successes – as evidenced by the continuous improvement in patient satisfaction, patient safety and clinical quality measures and outcomes over the past decade.

An essential part of our success has been the support and commitment of our leadership and I am grateful to our Board of directors for their visible and focused steer and support. This continues to be a journey of building and embedding a culture of quality improvement throughout the Group, where the identification of opportunities for improvement becomes the responsibility of every employee.

In 2020, we experienced one of the biggest challenges in modern healthcare history. The COVID-19 pandemic highlighted the need for all our employees and senior leaders to work together, with decision-making and problem-solving happening as close to the issues being experienced as possible. Despite the COVID-19 challenges, quality care and clinical excellence remained a constant focus. I have deep respect for every employee and healthcare worker who went the extra mile and overcame the many challenges our facilities faced. However, we learned much and stayed true to our vision and mission of placing people at the centre of care to make life better.

I wish to dedicate this Quality Review to all our colleagues and healthcare workers we lost to the COVID-19 virus, all of whom contributed in some way to quality care and excellence. We honour them and acknowledge the loss to our business, their colleagues, their family, their friends, and the healthcare industry.

Finally, I wish to thank our Board of directors, executive management, and the clinical committee for their commitment to continuous quality improvement. Thanks must also go to our business operations teams, hospital management, doctors, nurses, pharmacists, and employees, all of whom are so committed to quality excellence and who made a difference in the quality and safety of our services over the past decade.

I am confident that with the strong quality culture embedded within our business and the commitment to ongoing quality improvement, we will continue to achieve the very best quality outcomes to make life better for our patients, our people and all our stakeholders over the next 10 years.

Yours in quality excellence

Peter Wharton-Hood
Group Chief Executive

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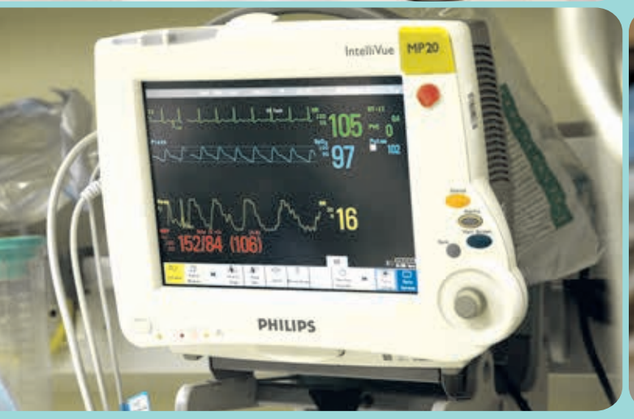


Life Healthcare Group Holdings Limited (the Group or Life Healthcare) is pleased to present this 10-year quality review (the review). We report on the progress made from 1 October 2010 to 30 September 2020 in pursuing our mission to improve people's lives through high-quality, cost-effective healthcare.

We prepared this review to provide our stakeholders – including patients, employees, doctors and specialists, healthcare funders and government – with a comprehensive outline of how we have consistently governed, managed and measured quality outcomes, and how these processes have evolved.

Comparability

Where a specific measure has been in place for less than 10 years, we have only included the period over which it has been measured. We indicate where the definition or measurement method has changed during the 10-year period.

INTRODUCING OUR QUALITY REVIEW 2020

A READER'S GUIDE

Our reporting suite

This review is part of a suite of publications tailored to meet our stakeholders' specific information requirements, which includes our:

- Integrated report
- Audited consolidated Group and Company annual financial statements
- Notice of annual general meeting and abridged shareholder report
- Year-end and interim results presentations

Readers can find our full reporting suite online at www.lifehealthcare.co.za associated with systemic fungal infections and potential increased mortality.

Feedback

At Life Healthcare, we value your feedback, as we endeavour to provide accurate, transparent and balanced information to our stakeholders.

We invite you to contact us, should you have comments or queries: https://www.lifehealthcare.co.za/contact-us/

Integrity of this review

This review evolved from our integrated reports, which are reviewed by management, Board of directors (Board) sub-committees and the Board – an integral part of this review's overall assurance, in respect of data integrity. A number of non-financial indicators have been assured by our external auditors. The content of this document has been reviewed by respective departments within Life Healthcare to ensure its accuracy and integrity.

Peter Wharton-Hood
Group Chief Executive

Adam Pyle
CEO – southern Africa

Marian Jacobs
Chair: Clinical Committee

INTRODUCING OUR QUALITY REVIEW 2020

WHO IS LIFE HEALTHCARE?

Life Healthcare is a global people-centred, diversified healthcare organisation listed on the Johannesburg Stock Exchange. Life Healthcare has over 33 years' experience in the South African private healthcare sector, and currently operates 66 healthcare facilities in southern Africa. Services include acute hospital care, acute physical rehabilitation, acute mental healthcare, renal dialysis, and employee health and wellness services.

The Group owns Alliance Medical Group, the leading independent provider of medical imaging services (MRI, CT and PET scans) within Europe, operating across 10 international countries. Life Molecular Imaging, a division of Alliance is an integrated pharmaceutical business that includes research and development laboratories, access to a network of cyclotrons and radio-pharmacies and imaging facilities, with Life Radiopharma being Alliance's distributor of radiopharmaceuticals to diagnose many types of diseases.

OUR VISION

To be a global people-centred, diversified healthcare organisation.

OUR MISSION

We improve the lives of people through the delivery of high-quality, cost-effective care.

OUR PURPOSE

Making life better.

OUR STRATEGIC PILLARS SUPPORT OUR VISION

GROWTH	QUALITY	EFFICIENCY	SUSTAINABILITY
Continue to grow our businesses, while diversifying our sources of revenue.	Deliver market-leading quality care and patient experience.	Deliver cost-effective care through our employees, clinicians, efficient processes, and the use of technology, research and innovation.	Effectively engage with our stakeholders to ensure our long-term sustainability.

OUR CORE VALUES

We aim to leave a lasting impression of understanding and meeting our patients' needs. We achieve this by focusing on our core values.

PASSION FOR PEOPLE
Those who are the life of our business.

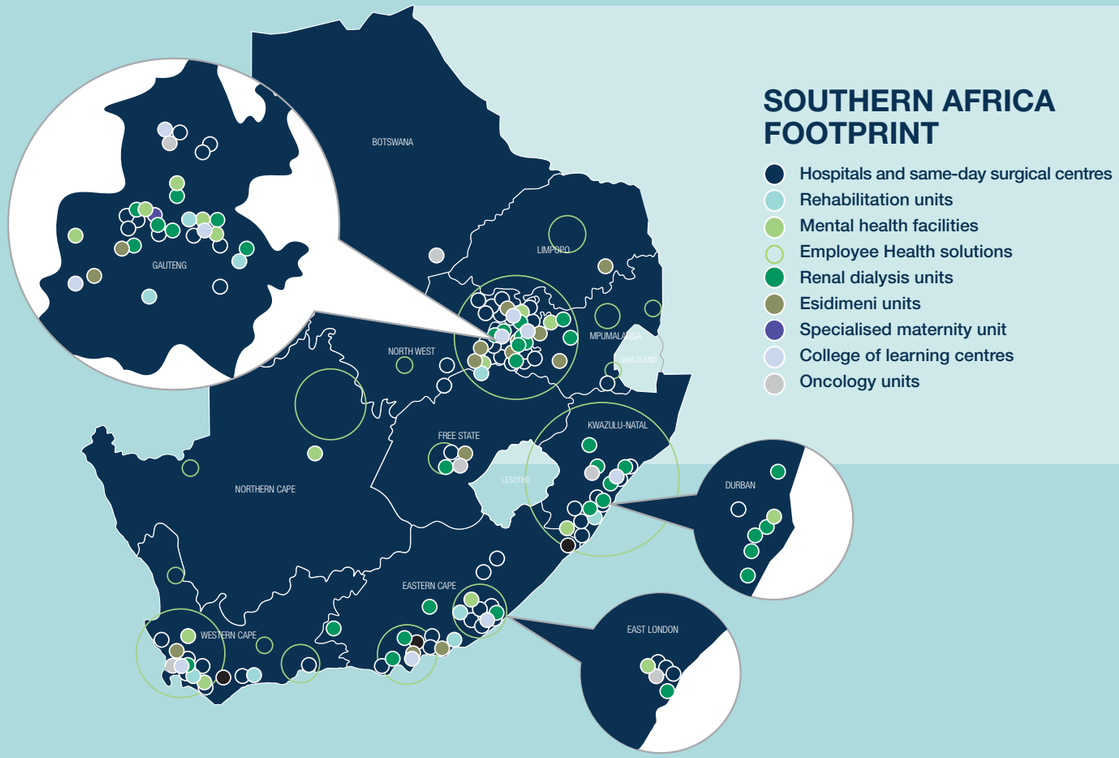
LIFETIME PARTNERSHIPS
With our patients at the very centre.

PERFORMANCE PRIDE
We act for the right reasons, with quality in mind.

Q^e
Quality to the power of e: ethics, excellence, empowerment, empathy, energy.

PERSONAL CARE
Adding the human touch.

WHAT WE DO



SOUTHERN AFRICA FOOTPRINT

- Hospitals and same-day surgical centres
- Rehabilitation units
- Mental health facilities
- Employee Health solutions
- Renal dialysis units
- Esidimeni units
- Specialised maternity unit
- College of learning centres
- Oncology units

WHAT DOES THIS REVIEW COVER?

This review covers the governance, management and performance of quality, as one of the Group's core values and a key strategic pillar.

It focuses on our primary operations in South Africa, with business activities also taking place in Botswana. These are referred to as our southern African operations, which as of 30 September 2020, represent 67.9% of the Group's revenue. They include both hospital and healthcare services divisions.

Our international operations, as at 30 September 2020, include Alliance Medical Group Limited across the United Kingdom (UK) and Europe, as well as Scanmed S.A. in Poland*. They represent 32.1% of the Group's revenue, and include diagnostic and molecular imaging, radiopharmacy, product development and healthcare services.

* *Scanmed was sold in March 2021.*

INTRODUCING OUR QUALITY REVIEW 2020 continued

In southern Africa, we strive to improve the lives of people through high-quality, cost-effective care offered through our hospital and healthcare services divisions.

HOSPITAL DIVISION

Acute Hospitals

Our hospital facilities are world class, technologically advanced and multi-functional. Through our employees and supporting healthcare professionals and specialists, we are able to deliver quality, compassionate and effective care. These hospitals are located in metropolitan areas in seven of South Africa's nine provinces, and in Botswana.

Principal offerings

- Specialised medical disciplines
- Community hospitals
- Same-day surgical centres
- Niche facilities
- Intensive care units (ICUs)
- High-care units

COMPLEMENTARY SERVICES

These specialised healthcare facilities offer inpatient and outpatient services, including acute rehabilitation, mental healthcare, renal dialysis and oncology. Our specialised care model promotes continuity of care and uniquely positions Life Healthcare to provide comprehensive therapeutic interventions for chronically ill and vulnerable patient populations.

Acute rehabilitation

Our specialised focus on physical and cognitive rehabilitation aims to restore quality of life for our patients and their families by optimising functionality and health outcomes.

Specialised care pathways

- Traumatic brain injuries
- Spinal cord injuries
- Complex orthopaedic injuries
- Stroke
- Neurological impairment
- Multi-morbidity
- Joint replacements
- Amputations

Renal dialysis

We have a national footprint of dialysis facilities, which are nephrologist led, providing outpatient-based chronic dialysis, inpatient-based acute renal dialysis or home-based peritoneal dialysis for patients with renal failure.

Mental health

We offer holistic support to our patients in their environments through our Life Employee Health Solutions services and our specialised mental healthcare teams at inpatient and day facilities. Our multi-dimensional approach to mental healthcare stressors and support includes care for voluntary, assisted and involuntary patients. We also provide electroconvulsive therapy (ECT) in fully equipped theatres.

Clinical care models for:

- General psychiatry
- Mood disorders and anxiety
- Work-related stress
- Bereavement and adjustment disorders
- Eating disorders
- Neuro-geriatric wellness
- Substance dependence support for dual diagnosis and complex care

HEALTHCARE SERVICES DIVISION

Life Esidimeni

Life Esidimeni offers specialised care for the most vulnerable in our society. We partner with South Africa's provincial health and social development departments to provide comprehensive long-term services.

These services are offered on contract, which is awarded through the National Treasury tender processes.

Principal offerings

- Long-term chronic mental healthcare
- Frail care rehabilitation
- Step-down care
- Primary healthcare
- Substance abuse recovery programmes
- Correctional services care

Life Employee Health Solutions (Life EHS)

We offer an integrated health risk management service providing wellness programmes, occupational and primary healthcare to corporate and institutional clients. We provide contracted on-site occupational and primary healthcare services to large employer groups and government departments, and specialise in implementing and delivering comprehensive health strategies for employees.

We also provide outcomes-based employee wellness programmes, helping companies and institutions in the public and private sectors to encourage and support healthy, balanced living for employees.

Principal offerings

- Occupational health services
- Outcomes-based employee wellness programmes
- Primary healthcare
- Direct doctor-to-patient virtual consultations for corporate clients
- COVID-19 employee risk tracker for employers
- COVID-19 symptom checker

LIFE COLLEGE OF LEARNING

Vision

- A diversified market-leading private healthcare institution that educates, supports and maintains clinically competent healthcare professionals through innovative teaching and learning based on a strong research foundation

Mission

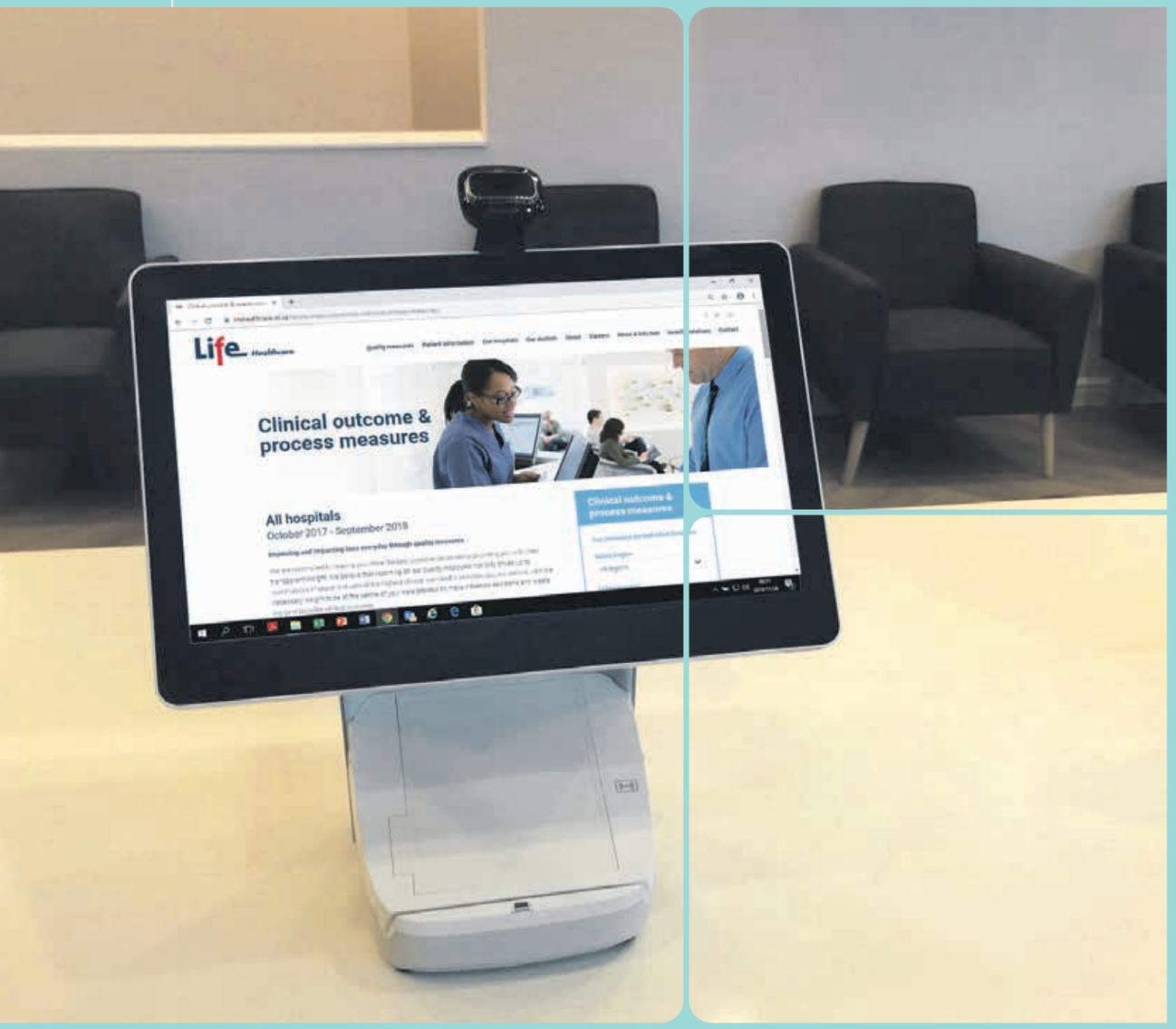
- To attract, develop and retain employees for Life Healthcare
- To ensure nursing employees have career development opportunities
- To develop a competent workforce through a continuing education approach in order to deliver evidence-based care
- To provide nationally and internationally recognised qualifications by adhering to governing legislation for education, training and development in South Africa

Purpose

Our purpose is to ensure that we:

- Promote quality patient care by aligning education to Life Healthcare's regional and national business needs
- Develop competent nurses through the delivery of accredited, innovative, quality education and training programmes
- Promote clinical practice based on a strong education foundation

02



REFLECTING ON 10 YEARS OF QUALITY EXCELLENCE

As a leader in the healthcare sector, Life Healthcare ensures that quality lies at the core of everything we do. This review reflects the journey we have been on over the past 10 years to improve quality across the southern Africa operations.

Our commitment to quality ensures the best outcomes for our patients and other stakeholders. Quality is a broad term that encompasses many aspects of healthcare, which are unpacked throughout this review.

Patients entrust their lives, or those of their loved ones, to us. It is our responsibility to provide them with care of the highest quality. For this reason, quality is embedded as a pillar of our Group strategy. “Quality of care standards” is also one of the material matters of the Group (a matter we identified that could significantly affect the value we create for our stakeholders).

Life Healthcare’s quality outcomes have substantially improved since 2010. This is proof of the efficacy of our efforts and testament to our ongoing commitment to quality excellence.

REFLECTING ON 10 YEARS OF QUALITY EXCELLENCE

WHAT QUALITY MEANS FOR LIFE HEALTHCARE

From the start of our quality journey, we recognised the importance of consistency and sustainability to achieve our desired outcomes. With this in mind, we established our clinical governance framework and quality management system (QMS) – the governance and management structures that support the delivery of quality outcomes.

The dual targets of Life Healthcare's quality journey are to:

- Make life better for our patients by enhancing patient experience, including clinical outcomes
- Make life better for our people by improving employee health, safety and wellbeing; supporting nurses and pharmacists; and partnering with doctors and specialists

These targets are inextricably linked and impact each other.

The key performance indicators (KPIs) we use to track our performance against these targets, with 10-year metrics, are set out in the "Measuring our performance" chapter from page 31.

Each patient's experience of our facilities and services is critical

If patients are dissatisfied with their experience, they will not return and/or recommend Life Healthcare to others. Patients' satisfaction depends on every aspect of our business: from admission, bedside care and food, to facilities, clinical outcomes and rehabilitation. We aim for perfection at all touchpoints.

"CARE" is a core element that enables Life Healthcare to deliver sustainable value to patients. We define care as the responsibility to deliver quality, service, respect and empathy to our patients. Through patient-centric care, we endeavour to address patient needs by consistently improving their experience at our facilities. Read more about our targeted CARE programme on page 46.

Our employees and supporting healthcare professionals deliver quality care

The Occupational Health and Safety Act, 85 of 1993 (OHS Act) requires us to take the necessary precautions to minimise potential hazardous impacts and protect employees from injury or harm in daily operational activities. However, since 2010, our commitment to the wellbeing of employees has broadened beyond the scope of the OHS Act to include overall physical health, positive work-life balance, career growth and mental welfare.

COVID-19 presented significant challenges to our employees' safety, health and wellbeing. It reiterated the importance of investment in these areas – particularly in the healthcare industry where there is a shortage of critical skills. Specifically, the crisis placed a spotlight on the significance of employees' mental health, which will be a stronger focus going forward.

IMPROVING AND IMPACTING LIVES EVERY DAY THROUGH QUALITY MEASURES

The past 10 years have seen a definite improvement in how we measure and monitor quality at Life Healthcare, as our scorecards and interpretation of data have evolved. This, in turn, has improved patient experience, including clinical outcomes, and employee wellbeing.

The strides the Group has taken can be attributed to four key factors:

1. A culture of quality
2. Measurement and reporting
3. Employee incentives
4. Collaboration

A culture of quality is deeply rooted across the Group

Quality is a foundational element of Life Healthcare's strategy, and has become an integral part of daily life throughout the Group. From the start of our journey, we assimilated quality into Life Healthcare's culture, and did not treat it as a tick-box item.

This journey has required – and will continue to require – commitment from everyone at Life Healthcare, supported by efficient and straightforward systems and processes.

Quality also receives appropriate attention from executive management and the Board. It is the first agenda item at monthly executive management meetings.
We systematically consider patient experience, employee safety and clinical outcomes. For each, we examine the granular details of the available metrics:

- Since a material number of events could be obscured by a negligible percentage change, we consider the recorded numbers – not just percentage changes. This helps us better understand the actual impact.
- We identify units and facilities that are excelling or underperforming. In both cases, reasons and trends are determined and workflow plans developed that use these learnings to improve quality across the Group.
- If required, issues are referred to the quality department for further investigation.

We have developed robust processes to monitor quality metrics

Over the past 10 years, measurement has become increasingly enabled by technology. We continue investing in technologies to capture and compare metrics, and help inform decision-making more efficiently.

Externally, we embraced transparency in quality in line with the global trend. We were proud to be the first hospital group in southern Africa to publish quality measures per hospital or facility annually on our website, with patient experience updated daily. This transparent external reporting on our quality measures further drives us to continuously improve and uphold the highest clinical and care standards.

REFLECTING ON 10 YEARS OF QUALITY EXCELLENCE continued

Delivering quality outcomes has a direct impact on remuneration

Since the journey to improved quality begins with accurate, transparent internal reporting, we incentivise employees through reward and not punishment. This promotes ongoing learning and builds trust and dedication to improvement. Any reported data that seems improbable is viewed with professional scepticism.

Quality measures form part of performance evaluations for all employees and create incentives for quality reporting and improvement.

Internal and external collaboration is critical to improved quality outcomes

Patient-centric care requires engagement between all internal role-players – doctors, nurses, pharmacists and hospital management. Over the years, we have honed an effective system. Key to this system is the partnership with the Life Healthcare clinical directorate of medical professionals to develop clinical quality initiatives, as detailed on page 86.

From the start of our quality journey, we have been guided by our belief that healthcare providers have a moral obligation to partner with other industry players and government, and we share quality improvement initiatives with the industry. This includes both strategic and practical interaction with the National Department of Health, in addressing challenges in healthcare delivery in South Africa. The outbreak of COVID-19 highlighted how critical such engagements are to enable a cohesive, far-reaching response.

OUR QUALITY JOURNEY IS NOT WITHOUT CHALLENGES AND TRADE-OFFS

The balance between quality and affordability

For Life Healthcare to be successful and sustainable, we must strike a balance between offering the best quality care and increasing our efficiency and cost effectiveness. This trade-off is considered in every decision we make to determine whether resources are being used to get the best value for money. Ultimately, prioritising quality care is more cost effective for the overall healthcare sector, as it leads to a more reliable system with fewer re-admissions.

Maintaining and streamlining quality programmes

While quality programmes are essential and useful, the impetus at the onset of a programme can be challenging to sustain. Healthcare workers' primary focus is – and should be – on the day-to-day care of patients. Rigorous and scientific recording and monitoring of quality measures can take time away from direct patient care and increase the workloads of nurses, doctors and pharmacists. Therefore, it is critical that ongoing betterment through targeted programmes is entrenched in the culture and structures of the Group, and supported by enabling technologies. We are working towards replacing manual reporting with automated systems. However, our significant investments in this area need to be measured and well researched, as they require extensive training and change management and can be vulnerable to data breaches.

Attracting and retaining the best people

The shortage of skilled healthcare professionals continues to challenge the industry worldwide. Quality care for patients hinges on competent and committed doctors, nurses and pharmacists. Therefore, we invest in:

- Optimising working conditions to ensure our healthcare workers are able to provide the best care for patients
- Training and career development
- Fair and competitive remuneration

In addition, management needs to be proactively involved at hospital level to ensure all employees – permanent and temporary – are upholding Life Healthcare's quality standards.

OUTLOOK AND APPRECIATION

The quality journey that began in 2010 created a base for where we will go over the next 10 years. We will continue to strive for 100% quality excellence, frequently evaluating the metrics we use to monitor our progress to ensure they remain useful and comparable to international best practice. This journey has many enabling factors, the most critical of which is the buy-in of the Group's various stakeholders.

For more detail on our material focus areas, priorities and expectations for the future of Life Healthcare's quality outcomes, refer to the "The future of quality at Life Healthcare" chapter on page 93.

To our patients, who are at the centre of this endeavour, thank you for your continued patronage and feedback.

We have the utmost appreciation for our employees who are the primary providers of excellent quality care. This includes the entire Life Healthcare ecosystem – nurses, pharmacists, doctors and support employees. We would also like to thank the Board for its unfailing commitment to driving quality – its experience, expertise and support are invaluable.

To our investors and funders, thank you for your continued investment.

Adam Pyle
CEO – southern Africa

03

GOVERNING TO SUPPORT QUALITY OUTCOMES

2014

We adopted ICNET, a web-based tool using **real-time patient information** for improved infection prevention and outbreak control

2017

Clinical committee established in recognition of the fact that providing **quality healthcare is the Group's core business**

2018

We became the **first** private hospital group **in South Africa** to publish our hospital quality scores on our website, on a per-hospital basis

2020

In the face of COVID-19, **Life Healthcare's people** continued to apply the patient-centred principles of quality and safety

The Life Healthcare Quality Management System

is **certification** through the British Standards Institution assurance mark

Life Healthcare iShift programme

is an internally developed **continuous quality improvement** methodology

The Life Healthcare culture of quality

is a foundational element of the **Group's strategy**

THE IMPORTANCE OF PEOPLE-CENTRED GOVERNANCE

Life Healthcare's purpose is "Making life better", meaning we exist to improve the lives of our patients, our employees and partner doctors. With this review, we hope to provide interested parties – both internal and external – with practical evidence of our application of this purpose.

People-centred governance is a concept based on the United Nations principles of transparency, accountability, participation and responsiveness. A people-centred approach is also promoted by the World Health Organization as critical to well-functioning health systems and the improvement of health outcomes for all people.

While this approach and these principles are formally applicable to public health systems, they can – and should – also apply to quality and clinical governance at private healthcare groups like Life Healthcare.

This review provides the opportunity to reflect on the past ten years, and how Life Healthcare's approach to quality has evolved. It shows how far the Group has come and what has been achieved. Furthermore, it affords an opportunity to reflect and ensure the Group's quality approach and initiatives remain aligned with its broader strategy, and can act as a new base from which to envision where we hope to go.

The Life Healthcare Board provides direction and oversight of all aspects of the Group, and in recognition of the fact that providing quality healthcare is the Group's core business, the clinical committee was established in 2017.

The Board mandated the committee to develop monitoring and oversight mechanisms for clinical quality, patient safety and patient experience, thereby maintaining the highest standards of care, backed by continuous improvement, innovation and research.

Since its establishment, the committee has dedicated time to develop the Life Healthcare clinical governance framework. The framework consolidates operational mandates from across the Group to establish a culture, systems and processes that support the delivery of quality outcomes. We are confident that the framework as it stands today sufficiently covers the diverse components of clinical and quality governance needed for appropriate oversight. However, we acknowledge that there is always room for improvement, and the framework remains open for reflection and review.

The mechanisms we developed, including the framework and the Life Healthcare quality policy and QMS, are based on the principle that if we diligently use the best scientific evidence and expertise, and ensure treatments are consistent with patient values, we will achieve quality outcomes.

The metrics and initiatives described in the "Measuring our performance" chapter indicate how we measure, ensure and improve quality and clinical performance through evidence and consensus-based best practice. Quality accreditation systems and assurance over quality outcomes provide robust checks and balances, giving the clinical committee and the Board comfort that the Group's oversight and implementation mechanisms result in consistent quality care and continuous improvement.

The committee also acts as the interface between the Board and the frontline, where quality care and clinical practice is applied. This gives the Board peace of mind that the quality principles established at Board level are translated appropriately into clear roles and responsibilities throughout the Group. The committee regularly engages with the quality department, the clinical directorate and the CEO. In addition, we maintain an open-door policy, meaning any employee is free to engage the committee on pertinent matters of quality care or patient experience.

To ensure the clinical committee has the appropriate skill and experience to effectively execute its mandate, it is comprised of members with diverse backgrounds, including clinical and healthcare governance, public sector administration, hospital management and academia. While we are satisfied that the committee has the required skills and experience to have objective judgement and provide appropriate oversight, succession planning is an ongoing undertaking.

It is to the credit of the Life Healthcare Board that it prioritises the provision of quality healthcare as central to the business, which is not always the case in a revenue-generating private Group. I acknowledge this with gratitude.

I also thank and commend the clinical committee for developing oversight and monitoring mechanisms in a considered and meticulous manner over the past four years.

Appreciation is also due to the Group executive committee and management teams for supporting the implementation of the programmes and initiatives listed in this review. In particular, the quality department not only applies the Group quality policy and QMS, but also helps build a culture of quality at Life Healthcare through forums, workshops, teachable moments and enabling processes and systems.

Most importantly, I express my deep appreciation for the Group's frontline healthcare workers – the nurses, practitioners, pharmacists and support employees who deliver quality and clinical excellence to patients every day. It has been heartening to see, under the extremely pressured circumstances caused by COVID-19, that Life Healthcare's people continued to apply the patient-centred principles of quality and safety. Our frontline workers demonstrated initiative, courage, compassion and selflessness, and we are immensely proud of their efforts.

Professor Marian Jacobs
Chairperson: clinical committee

To ensure trust in Life Healthcare's services and to secure the credibility and reputation of the Group, quality is embedded into our governance structures.

The responsibility to do what is right, to serve our patients and protect our people, rests with every person at Life Healthcare. I am proud to be associated with this Group and its strong, capable and supportive teams.

BUILT ON EFFECTIVE GOVERNANCE STRUCTURES

Life Healthcare's clinical and quality governance structures provide a framework to ensure high-quality healthcare that is safe, effective and cost efficient.

Effective governance relies on creating a system through which committees and departments are accountable for continuously improving quality and maintaining high standards of care. Our clinical and quality governance structure is set out below.

BOARD

Provides direction and oversight of the Group, including clinical quality and compliance

CLINICAL COMMITTEE

Provides oversight of the Group's clinical, quality and patient safety strategy, results and initiatives across all geographies

GROUP EXECUTIVE COMMITTEE

Reviews the Group quality scorecard and provides feedback to the clinical committee

SOUTHERN AFRICA EXECUTIVE COMMITTEE

- Monitors the quality scorecard, noting trends and deviations and recommending corrective actions
- Approves new initiatives and projects
- Reviews the transparency of reporting of the national, regional and hospital/facility clinical and quality review structures

Refer to the "How we manage quality performance" section from page 24 for detail.

NATIONAL, REGIONAL AND HOSPITAL/FACILITY CLINICAL AND QUALITY REVIEW STRUCTURES

National

- Provide clinical leadership and engagement to develop clinical strategy
- Oversee clinical outcomes and related serious reportable events
- Provide oversight for clinical and quality strategic initiatives
- Identify and mitigate risk

Regional

- Review clinical and quality performance outcomes and the effectiveness of improvement initiatives
- Identify and mitigate risk
- Review quality assurance outcomes and legal compliance

Hospital/facility

- Review clinical and quality performance outcomes
- Manage the quality assurance process
- Identify and mitigate risk and drive improvement initiatives

Clinical review and medico-legal forum

- Analyse trends of incidents and adverse events
- Identify areas for improvement and decide on actions to be taken

Various management-level committees across all jurisdictions implement policies and processes on clinical compliance and governance.

OUR CLINICAL GOVERNANCE FRAMEWORK FACILITATES AN ENVIRONMENT CONDUCIVE TO EXCELLENCE. THE FRAMEWORK ALSO DRIVES IMPROVEMENTS TO PROCESSES ACROSS THE BUSINESS, ENABLING US TO ACHIEVE OUR DESIRED QUALITY OUTCOMES.

THE CLINICAL COMMITTEE

as at 30 September 2020

Chairperson

Prof. Marian Jacobs

Members

Dr. Malefetsane Ngatane
Dr. Victor Litlhakanyane
Garth Solomon

Role

The overall functions of the committee are to assist the Board in:

- Ensuring that external oversight of the Group's clinical governance arrangements and country-specific regulatory compliance is in place
- Providing assurance that there are appropriate measures in place to monitor clinical quality, patient safety and patient experience throughout the Group
- Ensuring that the quality of services provided to patients is continuously improved; the highest standards of care are safeguarded; and an environment is created in which clinical efficiency and excellence is promoted, and innovation and research rewarded
- Ensuring that an accurate reflection of existing clinical risks, key controls, assurances, and action plans exists, as well as the plans to address such risks

Key focus areas over the past four years

- Establishing the Life Healthcare clinical committee and developing and applying the clinical governance framework
- Securing alignment between all concerned parties and standardising clinical governance processes by geography
- Working with the clinical team to improve clinical effectiveness and outcomes
- Integrating the clinical risk register into the broader Group risk register by collaborating with the risk, compliance and information technology (IT) governance committee
- Monitoring and managing medico-legal risks and working with the clinical team to develop mitigation and prevention measures
- Progressing patient safety measures and initiatives from mitigation focused to prevention focused and improving the response rate for patient experience and satisfaction measures
- Oversight of quality assurance, including review of quality accreditation systems
- Expanding the Group's evidence and consensus-based KPIs and dashboard measures
- Monitoring the health and safety of the Group's employees and infrastructure

Areas of future focus

- Continuing to make life better for Life Healthcare's patients, employees and partners
- Promoting people-centred governance by developing an understanding of the concept across the Group
- Affirming the acceptance of healthcare as core to the business
- Continuing to oversee and manage quality and clinical risks and outcomes
- Exploring private-public partnerships to provide access to quality affordable personal health services for all, particularly in the context of South Africa's emergent National Health Insurance

HOW WE MANAGE QUALITY PERFORMANCE

LIFE HEALTHCARE HAS TWO KEY COMPONENTS DRIVING QUALITY, NAMELY QUALITY ASSURANCE AND QUALITY IMPROVEMENT:

- We maintain standards and identify gaps that exist within our system through our quality assurance processes
- We enhance established processes to improve the entire quality management system (QMS), from patient experience and patient safety to employee safety and clinical outcomes

OUR QUALITY DEPARTMENT, SUPPORTED BY THE BOARD'S CLINICAL COMMITTEE, IS RESPONSIBLE FOR:

- Implementing the quality policy
- Maintaining the QMS
- Executing internal clinical and quality strategies throughout Life Healthcare
- Supporting cross functions to improve outcomes and process measures

OUR QUALITY POLICY

LIFE

- Ensuring wellbeing and quality of life
- Respecting the rights and dignity of patients, their families, customers, employees and other stakeholders
- Providing care that is personal and relevant to patients' individual needs

HEALTH

- Striving to achieve the best possible outcomes for patients by delivering clinical excellence throughout patients' journeys in our hospitals and facilities
- Protecting the health of patients, employees and other stakeholders

CARE

- Delivering exceptional quality healthcare service in partnership with our doctors and members of the multi-disciplinary healthcare teams
- Protecting patients' and stakeholders' rights by ensuring privacy and confidentiality at all times
- Always being mindful of respect and empathy while engaging in thoughtful interactions with patients and customers to ensure a positive experience

Life Healthcare is committed to:

- Complying with all relevant legal and statutory requirements, including the OHS Act. These constitute the minimum standard for all processes and systems throughout the Group.
- Identifying, mitigating and managing any risk to patients, employees and other stakeholders.
- Continually improving by implementing stringent quality standards and international best practice.
- Monitoring and improving the effectiveness of our QMS.
- Setting appropriate targets and objectives relating to clinical care, health, safety and quality for all business units.
- Preventing incidents that negatively impact patients, stakeholders, employees and the environment through proactive risk management.

COMPLYING TO NATIONAL DEPARTMENT OF HEALTH QUALITY REQUIREMENTS

Until the 2018 financial year, the minimum standards for quality in all hospitals and facilities were promulgated by the 2011 Department of Health National Core Standards. In 2019, this was replaced by the Norms and Standards Regulations promulgated by the Minister of Health.

As soon as the Office of Health Standards Compliance (OHSC) inspection tools are finalised, Life Healthcare will entrench these norms and standards into the QMS processes, making them part of our standard operating procedures. We will conduct periodic internal audits to ensure we comply with these regulations.

The statutory requirements set by the Department of Labour, as stipulated in the OHSC Act and other related acts, are used as the minimum standard for processes and procedures.

OUR QMS

An effective QMS translates into a service that better meets the needs of our patients. Therefore, quality-related elements are managed through a single QMS, which aligns all processes and systems potentially impacting the delivery of quality patient care and services with the system. Our QMS drives behaviour and ensures compliance with legal requirements, industry standards and internal Group requirements.

Life Healthcare's integrated QMS is based on the principles and standards of the High-Level Structure of the International Organization for Standardization (ISO). It is based on a factual approach to quality improvement – through consistent monitoring, measurement, management and reporting. In line with the global healthcare industry trend, we embraced a transparent approach to our reporting and data management system.

The term integrated management system indicates that the Group has effectively integrated quality management system (QMS) ISO 9001 and environmental management system (EMS) ISO 14001, into one management system across all facilities

Our QMS certification is through the British Standards Institution (BSI) assurance mark, which is for organisations whose management systems have met or exceeded the requirements of the BSI, a business standards company that helps organisations make excellence a habit globally.

In 2007, Life Healthcare became the only healthcare group in South Africa to achieve a multi-site ISO 9001 certification. The ISO 9001 standard details a number of elements which – if implemented effectively – will result in continual improvement of our QMS.

Our acute hospitals, Life College of Learning, and Life EHS and its occupational health clinics retain their ISO 9001:2015 quality management certification. Life EHS and its occupational health clinics are in the process of completing the migration from British Standard Occupational Health and Safety Assessment Series (OHSAS) 18001:2017 to ISO 45001:2018.

The Group's certification extends to all acute hospitals, day clinics, acute rehabilitation and mental health facilities, renal facilities, and the Life College of Learning.

"TODAY, 14 YEARS AFTER LIFE HEALTHCARE FIRST RECEIVED QMS ACCREDITATION, 174 DAYS OF QUALITY AUDITS HAVE BEEN COMPLETED AT 56 LIFE HEALTHCARE FACILITIES ACROSS THE COUNTRY. IT IS EVIDENT THAT CONTINUOUS IMPROVEMENT PLANS ARE IMPLEMENTED AND MAINTAINED TO ENSURE THE ENHANCEMENT OF PATIENT CARE AND PATIENT EXPERIENCE AS PART OF LIFE HEALTHCARE'S QUALITY JOURNEY. THE BRITISH STANDARDS INSTITUTION COMMENDS LIFE HEALTHCARE ON ITS CONTINUOUS DEVELOPMENT OF A QUALITY-DRIVEN CULTURE. WE VALUE OUR PARTNERSHIP WITH LIFE HEALTHCARE, AND WE WILL CONTINUE TO BUILD ON IT."

– CHARLENE HOLM, IMETA REGIONAL TECHNICAL AND COMPLIANCE DIRECTOR, BSI

HOW WE MANAGE QUALITY PERFORMANCE continued

BENEFITS OF QMS

- ISO 9001 provided a solid framework on which Life Healthcare has built a unique quality management system
- The certification journey has seen the Life Healthcare QMS develop from infancy to its current level of maturity
- Quality remains a strategic focus, with every employee playing an integral role in maintaining our quality culture

Life Healthcare Quality Management System Strategic benefits

- ISO focus on business strategy, risk management and legal compliance
- Increased investor confidence and marketability as a JSE listed company
- Group certification gave Life Healthcare a competitive edge in private healthcare in South Africa
- Quality focus through rigorous analyses and standardisation of processes and systems
- Duplication of Best Operating Practices in all facilities substantially decreased risks and resulted in greater efficiencies
- Improved management, mitigation and/or control of strategic and operational risk due to the ISO risk-focused approach

Customer focus benefits

QMS, through its focus on customer requirements and satisfaction created more efficient, effective systems and programmes:

- The Life Healthcare customer relationship management and patient experience measure (PXM) systems have been developed and enhanced to allow real-time, web-based reporting, which has led to greater vigilance at facility level and improved customer experience
- Focus on the “voice of the customer” through initiatives and programmes has proven to be instrumental in improving patient experience outcomes

Quality Outcome benefits

QMS encourages the importance to measure process outcomes:

- Measures are benchmarked against international standards
- Objectives and targets are set and performance measured and monitored
- Reporting has evolved from a basic manual to an advanced automated system
- An extensive set of score card measures are reported on
- Group focus is on management of trends nationally, regionally and per facility
- Quality Outcomes drive continual improvement of processes

Compliance benefits

- QMS requires a rigorous auditing process, which monitors compliance to standards
- The Life Healthcare internal audit process is well established
- All Functions contribute to the success and effectiveness of the Quality Management System
- Audit results provide management with evidence of non-compliance and high risk areas
- Audits enhance the understanding of the management teams of business standards and requirements
- Standardisation of processes and systems instils employee confidence
- Focus on continual improvement to enhance customer satisfaction

QUALITY MANAGEMENT AUDITS

Internal quality audits

All facilities assess their own compliance to the requirements of the Life Healthcare QMS (which include Life Healthcare and ISO 9001:2015 relevant legal requirements, and Department of Health National Core Standards), annually. Key focus areas are leadership responsibilities, risk-based thinking, continual improvement and a process approach to quality management.

Internal audits are the responsibility of operations (management at hospital/facility level), which complete a compliance audit against set criteria, and head office functions which review and verify the results.

The Life Healthcare internal quality audit process has evolved over 10 years due to the continuous refinement of the QMS to improve our standard of quality and alignment with industry requirements, including ISO.

In 2010 and 2012, internal audits were conducted by Group quality support specialists. In 2013 and 2014, internal quality peer audits were conducted, where peer hospital teams audited sister hospitals in the Group.

In 2015, the ISO 9001:2015 requirements, the Life Healthcare EMS and the management self-audit (MSA) methodology were introduced. The revised audit methodology aimed to minimise the load on resources by mandating hospital and facility management teams to conduct cross-functional audits, over a longer period of time.

As from 2017, the MSA was adapted to allow heads of departments and supervisors to audit their own functions.

External audits

External audits are conducted by an independent certification body and are in line with ISO requirements. They independently review whether the Group conforms to ISO standards, legal requirements and Life Healthcare standards.

All Life Healthcare facilities undergo an external audit at least once in a three-year cycle.

HOW WE MANAGE QUALITY PERFORMANCE continued

SETTING ROBUST SCIENTIFIC TARGETS

We developed dedicated key indicators and internal targets to measure performance from a quality perspective. Process and outcome targets for hospitals and facilities are based on realistic goals to drive continuous improvement across the Group. We distinguish three relevant targets:

- Measuring a hospital/facility against its past performance
- Benchmarking hospitals/facilities against other facilities of similar sizes
- Comparing a hospital/facility against other facilities within the Group

Targets are not an end in themselves – they are a means to an end, which is to motivate and inspire the implementation of quality standards and measures.

ENABLING SYSTEMS

An IT measurement platform enables management and employees at all organisational levels to measure their performance against the hospital's individual targets and against the Group's targets in a healthy and positive manner.

In 2014, we adopted ICNET, a tool for improved infection prevention and outbreak control which will ultimately lead to a decline in patient morbidity and mortality. It is a web-based tool which provides real-time patient information that can be used to efficiently generate reports for doctors to use when treating patients.

On 5 November 2019 we added the ICNET ABX module for pharmacy. System alerts have been configured to prompt pharmacists on potential treatment-related problems. This platform brings pathology results and Impilo patient records together, and allows pharmacists to prioritise patients for clinical assessment where potential treatment-related concerns have been identified by the system. System utilisation productivity is measured against the percentage of alerts timeously reviewed by pharmacists versus the ones auto-closed by the alert engine.

The iShift programme embodies our approach to continuous quality improvement, providing a knowledge repository that shares our learnings and projects that improve our services and create value. These projects are encouraged at every level. It could be as simple as a single employee trying to improve efficiencies in their individual work space, or as far reaching as local, regional and national projects.

We piloted a daily management system in 2020 to help hospital and facility leaders efficiently and effectively manage their departments, driving improvement and productivity.

OUR 10-YEAR QUALITY MANAGEMENT JOURNEY

2010

- Conceptualised our quality model and streamlined the quality department's roles and responsibilities
- Automated:
  - Patient incidents and alerts
  - Formal customer experience and complaints management processes
  - Audit reports

2011 – 2015

- Streamlining and improving quality processes and outcomes
- Introduced an integrated communication strategy and formal Customer relationship management system
- Certification of ISO 14001 Environmental Management Systems in large
- Patient satisfaction expanded to include Mental Health and Rehab Facilities.
- Clinical technical support data expanded and reports enhanced
- Outcomes for every function extended
- Transition 9001:2008 to ISO 9001:2015
- Compliance to the National Department of Health Core Standards in our Quality Management System

2016 – 2018

- Structured quality-related training programmes
- Developed four separate automated scorecards on outcomes and process measures – Patient experience, Patient safety, Clinical outcomes and Employee safety.
- Certification of ISO 14001 Environmental Management System in medium hospitals
- Celebrated 10 year ISO 9001 certification
- Formalised Quality & Clinical Governance Structure introduced
- Formalised Quality Management Strategy in line with good governance practice (King IV)
- Implementation of quality improvement methodology
- Implemented a quality improvement methodology

2018 – 2020

- Established and refined the quality manager role
- Ensured alignment to Norms and Standards Regulations
- Adopted the HCAHPS (Hospital Consumer Assessment of Healthcare Providers and Systems) based patient satisfaction questionnaire for customer satisfaction feedback

Clinical technical support

- Focus on Leadership Responsibility
- Enhancement of Quality scorecards
- Enhancement of Clinical outcomes, patient safety, patient experience and the creation of the composite quality score

Employee wellness

- Developed the "Keeping Life on Track" application with LIFE EHS to monitor staff wellness during COVID-19 pandemic.
- Analysis and reporting of COVID-19 data to NICD and HASA
- Development, implementation and continuous updating of COVID 19 risk assessment

04

MEASURING OUR PERFORMANCE

2015

Life Healthcare adopted the internationally recognised HCAHPS methodology scoring for patient experience

2015

We launched the medication indicator audit process, leading to a steady decline in medication adverse events

2015

We launched the CARE programme to deliver healthcare that is focused around the needs, preferences and values of the patient

2015

We adopted the South African Society of Obstetricians and Gynaecologists BetterObs programme

2018

Life Healthcare's antimicrobial surgical prophylaxis success was presented at the clinical pharmacy congress in London

2020

In the face of COVID-19, Life Healthcare's people continued to apply the patient-centred principles of quality and safety

2020

We completed a pilot programme of the Perfect Ward real-time digital data capturing system

- **Pressure ulcer champions** in Life Healthcare ICUs help track and manage the development of pressure ulcers to reduce their occurrence
- Our **spotlight on cleanliness programme** received a national award for exceptional achievement in the area of quality improvement initiatives
- **Major Joints for Life** is a multi-disciplinary approach to hip or knee arthroplasty surgery, providing patients with an improved clinical treatment solution
- **Life College of Learning** obtained accreditation with the National Health Research Ethics Committee in 2018 – a first for a Private Higher Education Institution
- From 2015, total patient safety adverse events have been **externally assured**
- Life Healthcare was the forerunner in South Africa in implementing **Infection Prevention and Control bundles** to improve patient outcomes
- **The Life Healthcare mental health integrated care pathway** supports South Africa's National Mental Health Policy Framework and Strategic Plan
- Since 2015 our clinical pharmacy community has presented at the annual **South African Society of Clinical Pharmacy Conference** receiving multiple awards in all categories

MAKING LIFE BETTER FOR OUR PATIENTS

IMPROVING PATIENT EXPERIENCE

Our commitment to improving patient experience is entrenched in our core value, Q^e: ethics, excellence, empowerment, empathy, energy. Positive patient experiences are critical to the success of our business, and Life Healthcare entrenches a patient-first culture throughout the Group. We offer our patients:

- Excellent experiences at our facilities
- Quality care
- The best possible outcomes
- Clinical excellence

We are dedicated to preventing harm to patients in our care. To minimise harm, we rigorously record and monitor data on patient safety, adverse events and clinical infections. This allows for detailed analysis of incidents in individual hospitals and facilities and across the Group.

We also have a proactive alert reporting system in place at all hospitals and facilities. This is an internal preventative measure used to raise awareness of possible adverse events before they occur, allowing for pre-emptive corrective action.

To support improved patient experience, we develop:

- Targeted quality programmes to improve specific clinical areas (from page 34)
- Tailormade training interventions to further establish professional and positive behaviours (from page 46)

Measuring patient experience and satisfaction

The terms patient satisfaction and patient experience are often used interchangeably, but they are not the same thing:

- To assess patient experience, one must find out from patients whether something that should happen at a hospital or facility, actually happened or how often it happened.
- Patient satisfaction refers to whether a patient's expectations were met. Patients receiving the same care will have different expectations and will therefore also have different satisfaction ratings. Satisfaction is recorded by whether patients would definitely recommend the hospital or facility they were treated at to their friends and family. A single question is asked on an electronic feedback system.

Multi-national market research firm Kantar Millward Brown administers our patient experience measure (PXM) process, providing us with comprehensive feedback on all aspects of the patient journey – from admission to discharge. Since 2015, our PXM is based on the internationally recognised Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) methodology, which we have tailored to our specific needs.

The email or SMS survey asks for insight into a patient's hospital/facility stay and the level of service, with ratings for:

- The level of care received
- The rehabilitation process (if applicable)
- The quality of the equipment and facilities
- How quickly employees responded
- The information provided

In addition to the survey, a patient is given the following:

- A welcome letter on arrival, with details of who to contact with any requests or concerns
- Comment cards to provide feedback while in a hospital/facility
- A discharge letter and leaflet with information about what happens on the day of discharge, medication, wound care tips, follow-up appointments, self-care at home and general advice
- Details of the formal complaints management process

With the adoption of the HCAHPS methodology scoring in 2015, we also launched the CARE programme (refer to page 46). This initially involved formally training 14 000 employees to understand their impact on the patient journey and experience, and provided the tools to ensure we engage with our patients in a more thoughtful manner.

The first phase of the programme included all Life Healthcare employees and management, partner doctors, students and service providers at acute hospitals, rehabilitation units, mental health facilities, Life Esidimeni facilities, occupational health clinics and regional offices. The second phase included outsourced service provider employees, for example those responsible for cleaning, catering, security and garden services.

The programme has evolved and matured over the years, moving from project to process, leading to a steady improvement in scores.

Patient experience scores prior to 2015

Definition
A measure which indicates that a patient would definitely recommend the hospital or facility at which they were treated to their friends and family.

QUESTION:
How likely are you to recommend the specific Life Healthcare hospital/facility to friends and family?

RATING SCALE:
0 is definitely not and 10 is definitely will
The score is then converted to percentage

Prior to 2015, PXM was calculated using the Net Promoter methodology as reflected below:

PXM (%) – inpatient	2011	2012	2013	2014
PXM calculated as a percentage, not using HCAHPS	98.20	98.40	98.60	79.90

PXM (%) – emergency unit	2013	2014
PXM calculated as a percentage, not using HCAHPS	77.05	76.30

Patient experience scores post 2015

Patient experience – definitely recommend

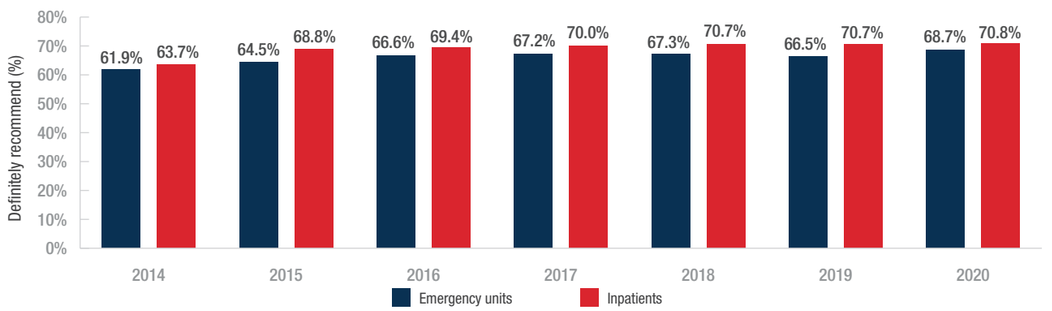
Definition
A measure which indicates that a patient would definitely recommend the hospital/facility at which they were treated to their friends and family.

QUESTION:
How likely are you to recommend the specific Life Healthcare hospital/facility to friends and family?

RATING SCALE:
Definitely yes; probably yes; probably no; definitely no
The score is for percentage answered definitely yes, therefore it only measures those who will definitely recommend Life Healthcare.

Patient satisfaction scores changed from Net Promoter methodology to HCAHPS methodology for inpatients in April 2013 and for emergency units in October 2013. We believe that the definitely recommend scores are more realistic in terms of patients' view of their experience in our hospitals and facilities and whether they would recommend us.

Life Healthcare patient experience definitely recommend scores 2014 – 2020



MAKING LIFE BETTER FOR OUR PATIENTS continued

Patient experience – overall rating out of 10

Definition
A measure which indicates what the patients overall rating out of 10 was for the hospital/facility at which they were treated.

QUESTION:
Please rate your overall hospital/facility experience.

RATING SCALE:
0 is terrible; 10 is excellent

PXM average score (out of 10) – inpatient	2015	2016	2017	2018	2019	2020
HCAHPS score	8.00	8.30	8.36	8.40	8.40	**8.39**

PXM average score (out of 10) – emergency unit	2015	2016	2017	2018	2019	2020
HCAHPS score	7.50	7.70	8.08	8.10	8.00	**8.15**

Refer to our website at www.lifehealthcare.co.za/patient-information/patient-services/patient-experience-survey/ for real-time PXM scores.

IMPROVING THE QUALITY OF CLINICAL NURSING CARE

The principle purpose of nursing in Life Healthcare is to deliver quality evidence based nursing care aligned to international best practice within an integrated framework of nursing education, clinical practice and infection prevention and control.

Nursing is regarded as the core of our business and as such plays an important role for business success in the delivery of cost-effective quality care for all our patients and Life Healthcare customers.

Nursing has the largest operational and capital budgets and is therefore responsible for embracing best operating practices and best operating behaviours in creating synergy in the replication of such practices, of which quality patient care remains the key critical success factor.

Nursing practice drives continuous improvement through qualitative and quantitative measures, as well as the implementation of proactive and innovative nursing management processes and initiatives sustained by a dynamic competent workforce.

Passport to Nurse in Life

Passport to Nurse in Life was implemented across the business with the focus on nursing professionalism (professional behaviour, and patient engagement and satisfaction). Introducing the Gentle Principles

- Gentle Moments campaign with the focus on professional empathetic behaviour and responsiveness
- Rest and Sleep Initiative to identify specific resting periods for patients during the day by switching off lights and closing doors and reducing all non-essential activities at ward level
- CARE programme and Sustainability Toolkit with the focus of improving customer experience and management

PATIENT DOCUMENTATION

Documentation and recordkeeping

The quality of patient documentation determines patient outcomes, through effective and accurate recording of the patient's nursing care interventions and condition. Patient documentation is the most critical form of effective communication amongst all members of the clinical care team. It provides evidence of patient care and the execution of the scientific nursing process.

Nursing documentation records are legal documents that reflect evidence of the delivery of competent, effective, quality nursing care by the correct category of nursing employees. They show alignment to the scope of practice, while executing the scientific nursing process of assessment, planning, implementation and evaluation during a patient's admission and stay in a Life Healthcare facility.

With this in mind, we implemented the following initiatives:

- The 10-month Documentation Initiative to help improve patient documentation and record keeping
- The introduction of the patient file dividers with the new patient documentation, highlighting specific focus elements to improve patient record keeping and prevent patient safety risks
- The Nursing Practice Flash awareness drive with the focus on improved record keeping and documentation in the hospitals

PATIENT SAFETY ADVERSE EVENTS

Life Healthcare focuses on the reporting and mitigation of all adverse events. Regarding patient safety adverse events specifically, we focus on four key risk areas:

- Patient falling adverse events
- Patient medication adverse events
- Patients acquiring pressure ulcers
- Procedure-related adverse events

Patient safety adverse events are investigated at operational level. Incident statistics are monitored for trends on an ongoing basis at all levels (i.e. facility, regional and national) and, should significant trends develop, corrective action reports are raised to correct adverse events and curb recurrence.

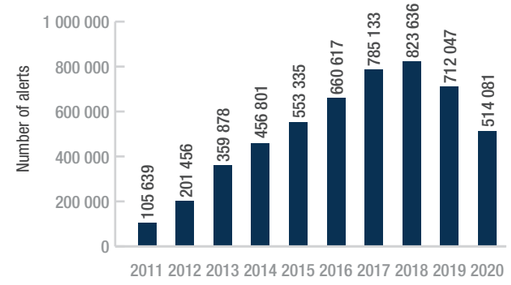
Life Healthcare has implemented an alert management system which serves as an early warning indicator in an attempt to prevent the occurrence of patient safety adverse events.

Definition
Alerts are an internal preventative measure used to raise awareness of possible adverse events before they occur, allowing for pre-emptive immediate corrective action.

Methodology
Number of alerts (near miss events)

↑ A higher number implies improvement.

Life Healthcare alerts 2011 – 2020



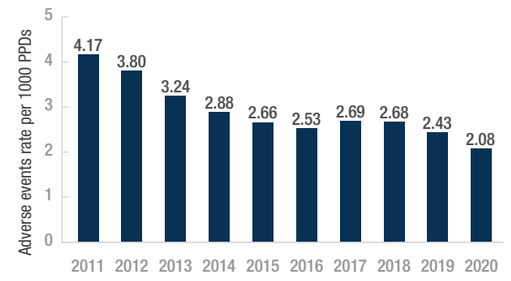
Total patient adverse events per 1 000 paid patient days (PPDs)

Definition
Unintended or unexpected events which did, or could have, resulted in harm (such as falls, behaviour, medication, pressure ulcers, death due to unnatural causes, burns, procedure-related incidents, other patient incidents, patients absconding and other patient information incidents).

Methodology
(Number of patient events/number of PPDs)*1 000

↓ A lower number implies improvement.

Life Healthcare patient adverse events 2011 – 2020



The decline in adverse events after 2014 can be attributed to a sharp rise in patient safety alerts, which increased by approximately 100 000 year-on-year from 2014 to 2015. The main contributing factor in 2020 was the decrease in activity at our facilities due to COVID-19.

From 2015 to 2020, these indicators were externally assured.

MAKING LIFE BETTER FOR OUR PATIENTS continued

Medication adverse events per 1 000 PPDs

Definition

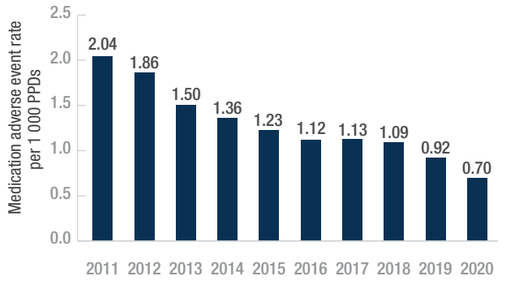
Includes pharmacy dispensing, nursing administration and issuing events, and other medication events, such as adverse drug reactions.

Methodology

(Number of medication events/number of PPDs)*1 000

↓ A lower number implies improvement.

Life Healthcare medication adverse events 2011 – 2020



The steady decrease in medication adverse events is testament that targeted interventions, particularly the medication indicator audit process launched in 2015, are effective. Life Healthcare's pharmacists also play a fundamental role in ensuring medication safety. Their increased presence in wards has contributed to fewer medication adverse events over the years.

In 2018, a set of interventions was implemented to further mitigate the risk of medication adverse events. These included:

- Non-punitive competency assessments with employees involved in medication errors, including temporary employees
- Ensuring that prescription charts are checked during the handover of each shift
- Increasing clinical pharmacist activity in wards and ICUs to elevate performance of medication safety management and proactive medication adverse event interventions
- Development of drug administration protocols to proactively manage risk
- Increased focus by night quality supervisors in units where medication errors occur at night
- Development of medication administration work procedures, guidelines, quality learnings and quality directives to ensure the safe administration of medication
- The introduction of a dedicated medication administration nurse wearing an apron indicating "do not disturb whilst administering medication" notification preventing the distraction of the nurse leading to medication adverse events
- Introduced medication bundles to measure and monitor compliance of key medication administration elements

MAKING LIFE BETTER FOR OUR PATIENTS continued

Falling adverse events (per 1 000 PPDs)

Definition

Includes slips and falls related to nursing, patient, equipment and therapy-related environment. Falling events could result in no or serious injury.

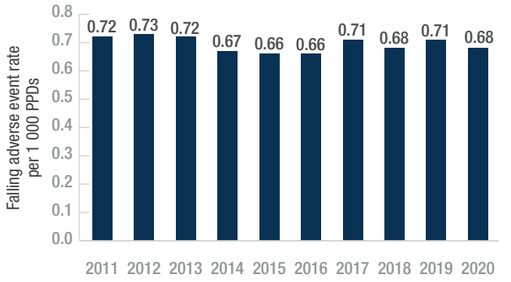
Methodology

(Number of falling events/number of PPDs)*1 000

↓ A lower number implies improvement.

In 2012, the nursing department developed a slips and falls guideline, in line with best practice. Regional nursing managers led the implementation of the guideline, supported by ongoing training and awareness initiatives. In 2018, there was a renewed drive to prevent falling adverse events, which focused on high-risk patients, effective handovers between shifts and in-service training. Hospitals and facilities also developed and implemented their own specific initiatives.

Life Healthcare falling adverse events 2011 – 2020



Procedure-related adverse events (per 1 000 PPDs)

Definition

Includes equipment not accounted for or found, rehabilitation equipment failure, incorrect use of rehabilitation equipment, incorrect diagnosis or treatment resulting in complications, doctors' orders not followed (excluding medication adverse events), incorrect or no identification, developed or acquired wounds, lesions and marks, procedures not followed resulting in complications or major risk to the patient, venous thromboembolism cases developed in hospital, patient documentation incorrect or incomplete, patient complication or patient compromised related to procedure or equipment, wrong site, wrong surgery, foreign object left in patient and intravenous (IV) therapy.

Methodology

(Number of procedure-related events/number of PPDs)*1 000

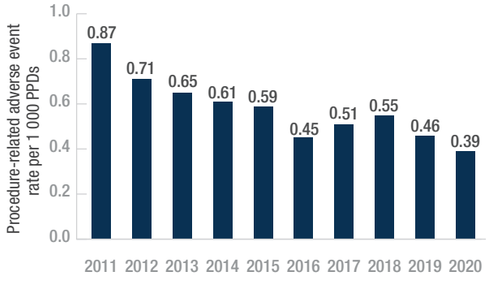
↓ A lower number implies improvement.

The steady reduction in events from 2012 can be attributed to the introduction of a World Health Organization (WHO) checklist and the inclusion of procedure-related adverse event measures on the Group scorecard.

There was a development of various work procedures, quality learnings, quality directives, CPD and essential competencies to address identified trends and risks.

Due to the increase in procedure-related adverse events from 2016 to 2018, we conducted an in-depth analysis of such events. As a result, in 2018 training was conducted on the importance of IV site checking and recording, due to an increase in IV therapy-related adverse events, leading to improved scores in the subsequent years.

Life Healthcare procedure-related adverse events 2011 – 2020



Pressure ulcer rate (per 1 000 PPDs)

Definition

Pressure ulcers developed in Life Healthcare facilities during patients' hospital stay. A pressure ulcer is caused by the breakdown of skin tissue (not present on hospital admission) due to insufficient pressure relief.

Methodology

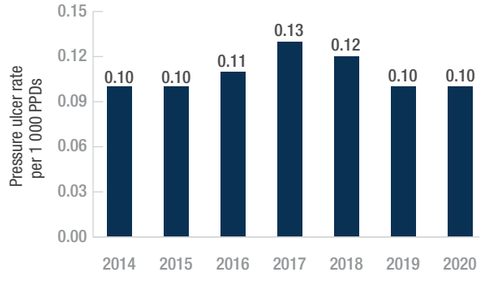
(Number of pressure ulcer events/number of PPDs)*1 000

↓ A lower number implies improvement.

Before 2016, the pressure ulcer rate was included under procedure-related adverse events. Due to an increasing prevalence trend that necessitated closer management, the rate was measured separately from that year. In addition, pressure ulcers were categorised according to different stages of development. This assists to better track and manage the development of pressure ulcers.

In 2017, the Group introduced the concept of "pressure ulcer champions" in ICUs. There was also an increased focus on the assessment of high-risk patients, resulting in a decrease of events over the next two years.

Life Healthcare pressure ulcer rate 2011 – 2020



INFECTION PREVENTION AND CONTROL

To ensure the highest standards, our comprehensive, well-entrenched infection prevention and control programme is aligned with evidence-based international best practice. Clinical indicators are determined using the guidelines of the Centres for Disease Control and Prevention (CDC). We focus on the most material metrics for proactively managing clinical infections.

Our Infection Prevention and Control bundles are a straightforward set of practices, usually three to five elements that, when practised collectively and reliably, improve patient outcomes. We were the forerunners in implementing infection prevention bundles in South Africa, and pioneered the "Best Care – Always!" campaign. The campaign brought private and public healthcare organisations together to share ideas and learnings on the application of specific bundles.

The bundles we measure are for the prevention of:

- Ventilator-associated pneumonia (VAP)
- Surgical site infections (SSI)
- Central line-associated bloodstream infections (CLABSI)
- Catheter-associated urinary tract infections (CAUTI)

They are based on the scientific improvement work done by the Institute for Healthcare Improvement, and were implemented in all Life Healthcare hospitals and facilities in 2010 and entrenched by 2011.

Based on Life Healthcare SSI trends C-sections were identified as an area for improvement and therefore as SSI bundle for C-section bundles was implemented.

MAKING LIFE BETTER FOR OUR PATIENTS continued

We initiated certain overarching improvement approaches that span across the bundles. These are:

HAND HYGIENE

Hand hygiene is the cornerstone of infection prevention and patient safety. All healthcare workers, patients and hospital/facility visitors are required to practise good hand hygiene. Quality learnings and quality directives were communicated to all disciplines across the business. Compliance was monitored through an ongoing audit process.

In 2014, the WHO introduced a multi-modal approach to hand hygiene – the "5 moments for hand hygiene" audits. In 2018, the approach for all healthcare workers to work "bare below the elbow" was emphasised. This reduces the risk of contamination with sleeves, watches, rings, etc.

In 2019 Life Healthcare focused on alcohol based hand rub being available for all points of care. We celebrate World Hand Hygiene Day annually on the 5th May, including all members of the multidisciplinary team and not just nursing.

CLEANLINESS

A clean hospital/facility environment is fundamental to the provision of safe, quality patient care.

The emergence of highly resistant organisms and difficult to treat infections, called for a more robust approach to hospital and facility cleanliness. In response, we developed the Spotlight on cleanliness programme to ensure high-risk areas are properly cleaned (refer to page 69).

In addition to this, a multi-layered environmental surveillance programme has been introduced with the focus on the macro environment.

REAL-TIME SURVEILLANCE

In 2014, an electronic surveillance system was implemented. It enabled real-time availability of laboratory reports, and alerts for highly pathogenic organisms. This allows infection prevention specialists to quickly isolate patients to minimise the risk of transmission.

Patient safety is enhanced through early detection and intervention which facilitates the implementation of relevant precautions. Patient and employee safety is at the heart of infection prevention.

Healthcare-associated infections (HAIs) per 1 000 PPDs

Definition

Combines all the HAIs determined according to the CDC guidelines – VAPs, SSIs, CLABSIs, CAUTIs and other infections associated with the hospital stay.

Methodology

(Number of HAIs/number of PPDs)*1 000

↓ A lower number implies improvement.

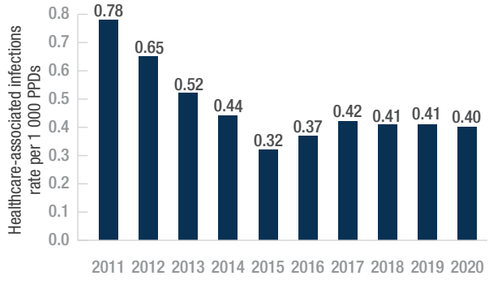
Life Healthcare was the front runner in the Southern African healthcare sector, introducing the collective of all four IPC bundles simultaneously across the group.

Increased bundle compliance relates directly to decreased infections. Every month, outliers for all infection categories are contacted and action plans for improvement are implemented. There was a significant decrease in HAIs following the implementation of the bundles, until 2015 when an awareness drive to ensure 100% reporting was initiated.

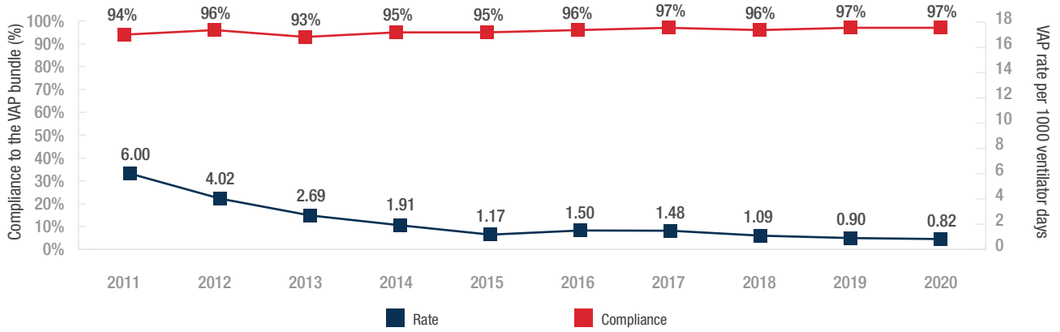
In 2019, a continuous professional development programme was introduced to retrain employees on both the elements of each bundle as well as the importance of compliance. Both hand hygiene and cleanliness scores have increased dramatically over the years and both factors will have positively impacted the infection rates.

From 2015 to 2020, these indicators were externally assured.

Life Healthcare healthcare-associated infections 2011 – 2020



Life Healthcare ventilator-associated pneumonia (VAP) 2011 – 2020



VAP rate (per 1 000 ventilator days)

Definition

VAP acquired while patients are intubated or 24 hours after extubation.

Methodology

(Number of VAP cases/ventilator days)*1 000

↓ A lower number implies improvement.

The reduction from 6.00 in 2011 to 0.82 in 2020 following the implementation of the VAP bundle is notable, and is testament to the value of evidence-based scientific infection prevention practice. Over time, the VAP bundles were adjusted in line with international best practice, continuous professional development modules were developed and regional workshops held. In addition, there was monthly follow up with outlier hospitals and facilities resulting in a year-on-year improvement in compliance with the VAP bundle, and the resultant decrease in the VAP rate.

VAP bundle compliance (%)

BUNDLE ELEMENTS:

Measuring compliance to the following:

- The head of the bed is elevated 30˚ to 45˚
- Sedation vacation – patient is assessed daily for readiness to extubate
- Deep venous thrombosis prophylaxis is given or foot pumps are used
- Mouth care is done at least six-hourly using chlorhexidine mouth wash

Methodology

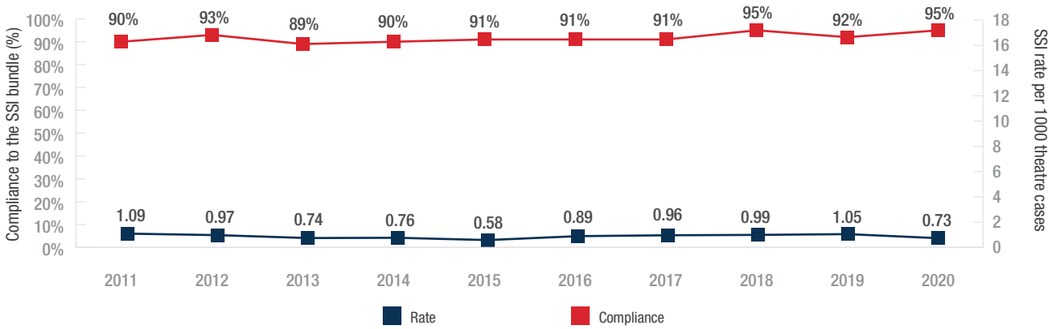
VAP compliance to all four elements/total number of applicable elements assessed*100

↑ A high number implies improvement.

Following the decreased compliance score in 2013, national, regional workshops were conducted with all Infection Prevention Specialists with bundle compliance as one of the key focus areas. Every month, outliers are requested to submit action plans to address non-compliant elements of the bundle.

MAKING LIFE BETTER FOR OUR PATIENTS continued

Life Healthcare surgical site infections (SSIs) 2011 – 2020



SSIs (per 1 000 theatre cases)

Definition

SSIs that develop up to 30 or 90 days after surgery (dependent on surgery types as set out by the CDC).

Methodology

(Number of SSIs/theatre cases but excluding scopes)*1 000

↓ A lower number implies improvement.

In 2015, there was a focus on the central sterilisation supply department to ensure adequate validation of sterilisation. Workshops were held with international sterilisation experts. As a result, a new validation product, a helix device, was introduced to ensure that steam adequately penetrates the newer hollow-bore equipment. New guidelines were written for central sterilisation supply department employees and training was done.

In 2017, we launched the antimicrobial stewardship (AMS) surgical prophylaxis quarterly audit following the introduction of the evidence-based surgical prophylaxis guideline. Continuous improvement is driven and tracked in all four components of the audit, namely correct antibiotic and dose, correct duration, timing of administration prior to surgical incision and the discontinuation of prophylaxis.

From 2016 to 2019 there was an increase in caesarean section infections, colorectal and orthopaedic-related infections. In 2019, a caesarean section bundle was implemented and a reduction in caesarean section infections was noted.

The low rate in 2020 is likely due to a limited number of theatre cases during COVID-19.

SSI bundle compliance (%)

BUNDLE ELEMENTS:

Measuring compliance to the following:

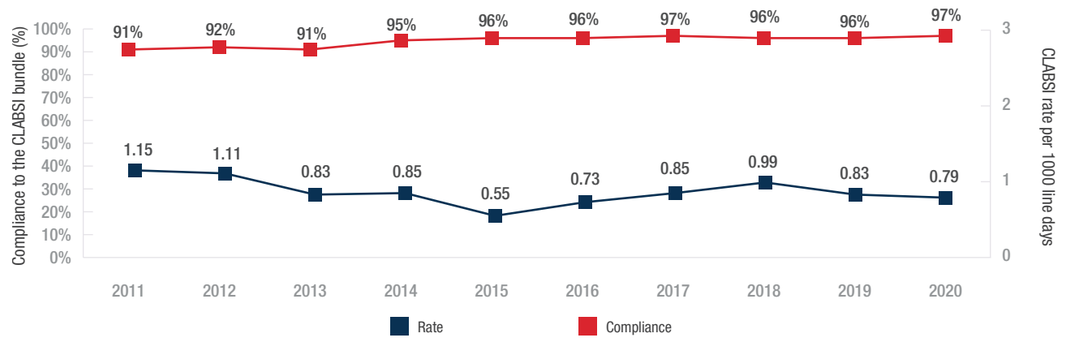
- Hair removal
- Antibiotic prophylaxis
- Glucose control
- Temperature control

Methodology

Compliance to all four elements/total number of applicable elements assessed*100

↑ A higher number implies improvement.

Life Healthcare central line associated bloodstream infections (CLABSIs) 2011 – 2020



CLABSIs (per 1 000 central lines)

Definition

CLABSIs acquired while central line is in situ and within 24 hours after removal.

Methodology

(Number of CLABSIs/central line days)*1 000

↓ A lower number implies improvement.

In 2012, a specialised chlorhexidine impregnated dressing was introduced for all central lines, resulting in the reduction of CLABSIs.

In 2018, an awareness campaign was run called “Scrub the Hub” (of central line connections and ports). An awareness poster was distributed and employees were trained on the importance of disinfecting ports and connectors and also allowing the connectors to dry completely before accessing the lines.

CLABSI bundle compliance (%)

Definition

Measuring compliance to the following elements:

- Hand washing procedure was followed
- Maximal barrier precautions were used by the doctor as per checklist
- 0.5% chlorhexidine in 70% alcohol skin preparation is done and allowed to dry before insertion
- Central line is sited in the subclavian or jugular vein
- A daily review is done of the need to retain the line
- The line is properly secured with a special dressing or device or stitched
- The dressing is visibly clean and intact

Methodology

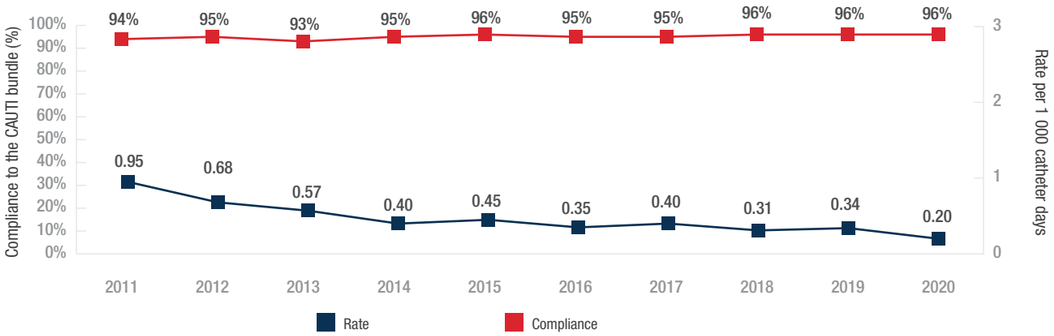
CLABSI compliance of all seven elements/total number of applicable elements assessed*100

↑ A higher number implies improvement.

CLABSI (and other risk areas) were addressed in focus groups and in regional workshops. Annual regional workshops are held nationally and the agenda always focusses on trends and risks that are identified. Hospitals have the platform to share best operating practices in these forums.

MAKING LIFE BETTER FOR OUR PATIENTS continued

Life Healthcare catheter-associated urinary tract infections (CAUTIs) 2011 – 2020



CAUTIs (per 1 000 catheter days on one line)

Definition

CAUTIs acquired while patient is catheterised and within 24 hours after removal.

Methodology

(Number of CAUTIs/urinary catheter days)*1 000

A lower number implies improvement.

With the ongoing focus on this purely nursing driven bundle, the steady decrease in the CAUTI rate over the years can be attributed to monthly and quarterly follow ups with outlier hospitals and facilities, leading to year-on-year improvement in bundle compliance.

CAUTI bundle compliance (%)

Definition

Measuring compliance of the following elements:

- A sterile catheter pack was used to insert the catheter.
- The catheter is properly secured to avoid pulling.
- Catheter (perineal) care is done at least twice daily and after bowel movements using hibiscrub and water, chlorhexidine and cetrimide or saline. A disposable cloth, cotton wool or gauze may be used (bar soap or face cloths are not used).
- A daily review is done of the need to keep the catheter in situ.

Methodology

CAUTI compliance of all four elements/total number of applicable elements assessed*100

A higher number implies improvement.

CAUTI bundles have been addressed at regional workshops and one-on-one feedback sessions with outlying hospitals and facilities. Hospitals and facilities are required to implement action plans and monitor their action plans for effectiveness.

Compliance to the CAUTI bundles has been driven through the nursing leadership management teams.

CLINICAL ALERTS

A proactive near-miss reporting system is in place to prevent potential adverse events. Alerts are reported and drive internal preventative measures at facility level through increased awareness of any potential unsafe conditions or actions.

There is a direct correlation between decreased adverse events and increased alert reporting over the years.

Total number of alerts

Definition

Refers to any unsafe condition or act, poor service delivery or complaint that could have affected the quality of service or health and safety of an employee, customer or visitor. Potential for damage to property, materials, equipment or the environment are reported, although they may not have occurred.

Methodology

The identification and management of alerts will decrease the number of adverse events. All operational departments are therefore encouraged to report alerts.

A higher number of alerts is desirable, as this has a direct correlation with a decrease in adverse events.

Alert reporting has increased steadily year-on-year, with a marked decrease in 2020, when occupancy in our facilities dropped. However, most of the alerts focus shifted to reporting COVID-19 incidences.

2011	2012	2013	2014	2015	2016	2017	2018	2019	**2020**
105 639	201 456	359 878	456 801	553 335	660 617	785 133	823 636	712 047	**514 081**

MAKING LIFE BETTER FOR OUR PATIENTS continued

SIGNIFICANT QUALITY PROGRAMMES

For the most part, patients entering a healthcare facility do so to address a health issue. They wish to move from an unwell state to a better and ultimately well state, most of which will take place within the confines of a hospital or facility. It is imperative, for the sake of the patient, that this occurs as effectively and efficiently as possible. To aid this, the clinical departments at Life Healthcare have implemented quality programmes and clinical outcomes measures which monitor the effectiveness and efficiency of the clinical care delivered.

THE CARE PROGRAMME

The difference between ordinary and special

Launched: 2011

The challenge

A strong – and necessary – focus on clinical excellence can sometimes mean healthcare workers overlook the importance of compassionate care. A patient-centred approach has been shown to decrease patient anxiety and increase trust in doctors and caregivers. From time to time, we need to be reminded that our contribution to patient care is more than just clinical outcomes.

In line with the Life Healthcare strategy of delivering market leading quality of care and the groups commitment to delivering a superior patient experience Life Healthcare embarked on the CARE programme in partnership with Trainiac. Life Healthcare believes that a positive patient experience is enhanced through thoughtful behaviour which ultimately culminates in the shift from providing good care to great care.

"Seeing the person in the patient aims to improve patients experience of care in hospital and to help staff deliver the sort of care they would like for themselves and families."

The objective

Life Healthcare is committed to delivering a superior patient experience across all identified touchpoints in all facilities and business units we believe in patient-centred care: healthcare that is focused around the needs, preferences and values of the patient.

OUR PATIENTS ARE AT THE CENTRE OF OUR CARE COMMITMENT:

- Our patients and their loved ones are partners in the care we provide
- We care for our patients in a dignified and supportive manner
- We listen to our patients with empathy
- We inform and involve our patients
- We respond quickly and efficiently to our patients' needs
- We acknowledge our patients' diverse cultures

Our CARE programme encourages employees to be more thoughtful and mindful and to demonstrate genuine care when they engage with patients. The objective is to provide the best possible patient experience at every interaction, in all facilities and support functions.

Our CARE programme initially included 24 000 Life employees and management (including Life Healthcare, Life Esidemini, Life Occupational Health and Careways (now known as Employee Health Solutions)), partners(doctors), students and service providers. It continues to be presented to new employees at induction. It incorporates the existing Life Healthcare values and brand attributes. The aim is to provide the tools and behaviours, and, to encourage employees to start or continue to be more thoughtful and mindful when engaging with patients. It is an interactive programme, where every touchpoint along the patient journey is mapped, and employees reflect on "maker and breaker" behaviours that impact directly or indirectly, on the patient experience.

Measurable results and outcomes

The efficacy of the CARE programme is evidenced by our patient experience and patient satisfaction measures.
Refer to page 33.

The CARE timeline

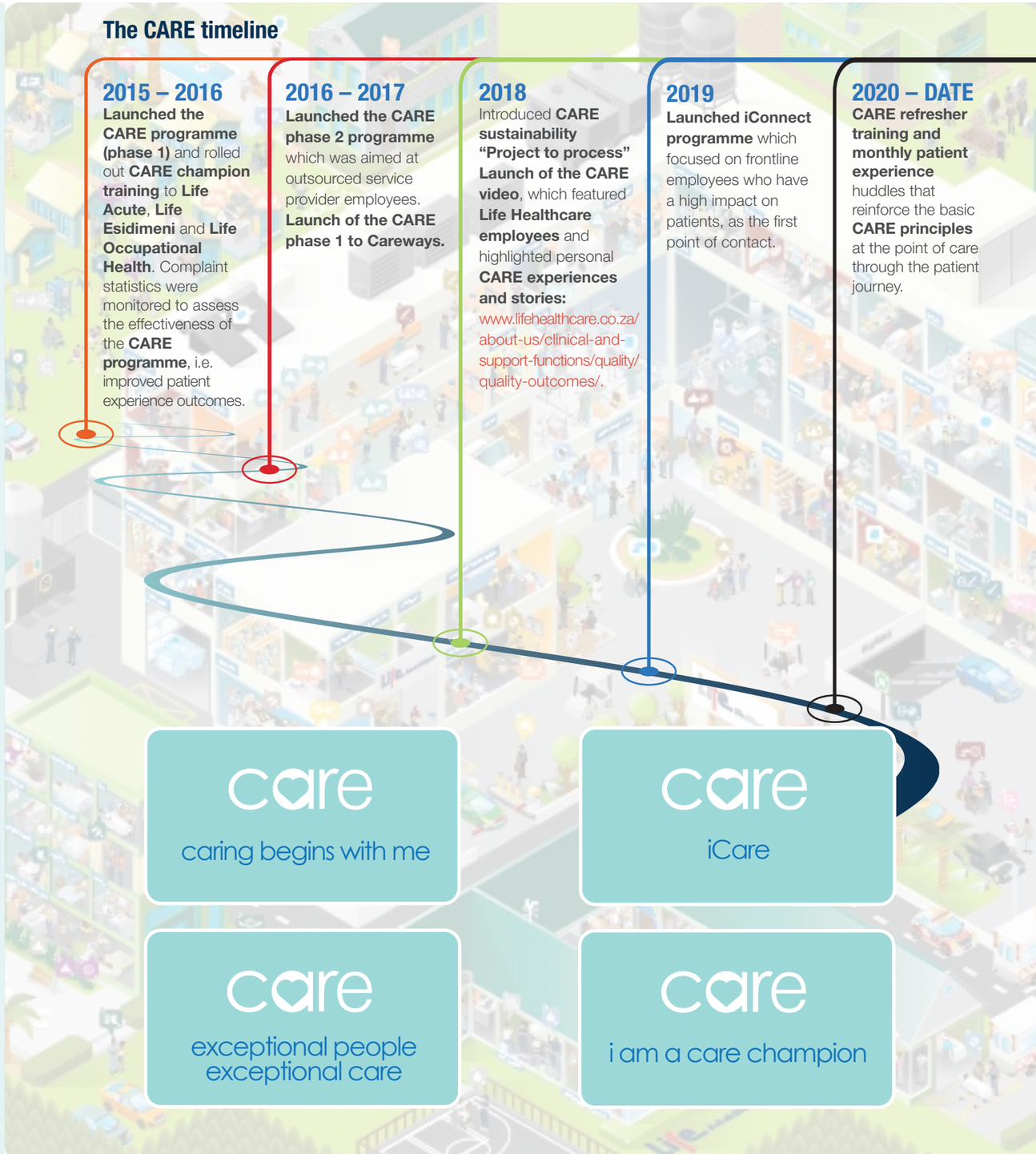
2015 – 2016
Launched the CARE programme (phase 1) and rolled out **CARE champion training** to **Life Acute**, **Life Esidimeni** and **Life Occupational Health**. Complaint statistics were monitored to assess the effectiveness of the **CARE programme**, i.e. improved patient experience outcomes.

2016 – 2017
Launched the CARE phase 2 programme which was aimed at outsourced service provider employees.
Launch of the CARE phase 1 to Careways.

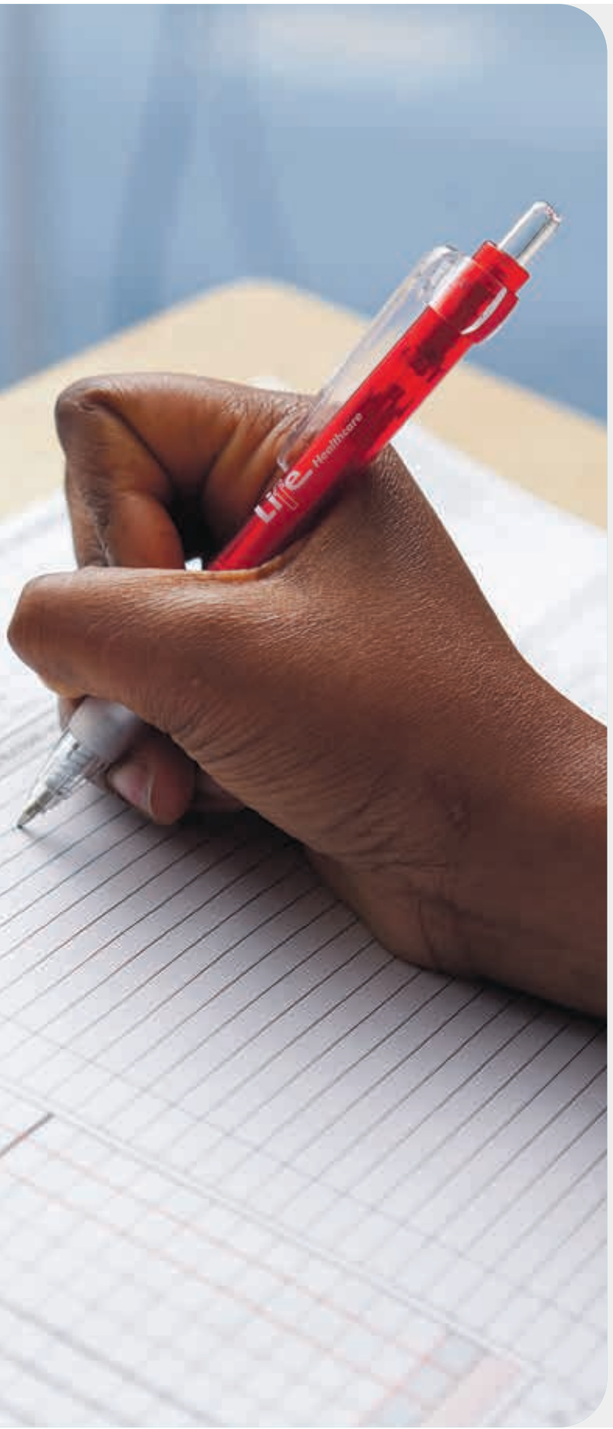
2018
Introduced **CARE sustainability "Project to process"**
Launch of the CARE video, which featured **Life Healthcare employees** and highlighted personal **CARE experiences and stories:** www.lifehealthcare.co.za/about-us/clinical-and-support-functions/quality/quality-outcomes/.

2019
Launched iConnect programme which focused on frontline employees who have a high impact on patients, as the first point of contact.

2020 – DATE
CARE refresher training and monthly patient experience huddles that reinforce the basic **CARE principles** at the point of care through the patient journey.



MAKING LIFE BETTER FOR OUR PATIENTS continued



ANTIMICROBIAL STEWARDSHIP (AMS) PROGRAMME

Optimising the use of antimicrobials

Launched: 2011

The challenge

The rapid increase in antimicrobial resistance globally is alarming. Due to this increase, the WHO highlights the importance of a one-health approach to address the issue. The WHO Global Action Plan and Antimicrobial Resistance document emphasises that antimicrobial resistance is a crisis that must be managed with the utmost urgency, and that an all-out effort is needed to optimise the use of antimicrobial medicine in human health.

The objective

We can optimise infection treatment and reduce adverse events and antimicrobial resistance by improving rational antimicrobial use and decreasing inappropriate antimicrobial use. This ultimately enables our healthcare professionals to enhance quality patient care and safety, and preserve the miracle of antimicrobials.

Our approach and measures

We remain committed to aligning our multi-functional AMS programme with internationally acknowledged best practice, tracking compliance with well-recognised key stewardship principles. We continue to develop interventions to address any non-compliance:

- One of our key focus areas is to reduce inappropriate antibiotic usage, with particular focus on carbapenems, an antibiotic class that should be reserved for serious infections only, and often only indicated as last-line therapy
- Due to antimicrobial exposure being one of the main risk factors for clostridiodes difficile (C. difficile) infections, the C. difficile infection rate per 1 000 PPDs is monitored as an AMS programme outcomes measure
- For AMS specifically, our ICNET ABX software system prompts pharmacists when a micro-organism is resistant to an antimicrobial, or when a micro-organism was cultured and the patient is not yet receiving the appropriate antimicrobial treatment

In 2018, Life Healthcare's antimicrobial surgical prophylaxis success was presented at the clinical pharmacy congress in London. In 2020, components of AMS were introduced as part of a COVID-19 therapy audit to reduce unnecessary antibiotic use focusing on this specific patient population.

Measurable results and outcomes

AMS bundle compliance (%)

Definition

Measuring compliance to the following elements:

- Surgical prophylaxis was stopped when the patient left theatre
- Upon reaching day seven of antimicrobial therapy, treatment was either stopped or altered
- Microbiology testing was requested
- Doctor reviewed the microbiology results to consider adjusting treatment
- IV hang time was within one hour of prescription
- When appropriate for patient care, there was a step down from IV to oral administration
- Appropriate daily dose (dosage and frequency)
- No duplication of antimicrobial spectrum
- Less than four antimicrobials prescribed simultaneously

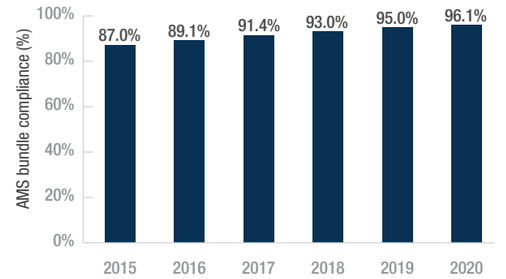
Methodology

(Total number of compliant elements/the total number of applicable elements assessed by nursing and pharmacy employees)*100

↑ A higher percentage implies improvement.

As the AMS programme evolved, fewer interventions needed to be suggested on bundle elements not compliant to core AMS principles outlined in our AMS bundle focus on lower scoring bundle elements resulted in improved bundle compliance. The percentage of patients on antimicrobial therapy assessed for AMS bundle compliance improved significantly over the years, making the improved bundle compliance percentage statistically significant.

Life Healthcare AMS bundle compliance 2015 – 2020



Over the last six years, doctor acceptance of AMS interventions has remained above the target of 80%. The steady improvement in compliance can be attributed to:

- In 2015, the AMS structural audit was launched and continuous improvement can be seen as hospital and facility AMS committees become more established
- In 2017, an AMS surgical prophylaxis quarterly audit was launched, and continuous improvement is evident in all four components of the audit: correct dose, duration, timing of administration prior to surgical incision and the discontinuation of prophylaxis
- In 2018, AMS outcomes measures were introduced to measure the impact of AMS on antimicrobial utilisation and antimicrobial resistance
- In 2020, focused AMS quarterly audits were introduced, conducted on a rotational basis with surgical prophylaxis audits to address international antimicrobial resistance concerns

MAKING LIFE BETTER FOR OUR PATIENTS continued

Acceptance of interventions to address non-compliance (%)

Definition

Based on non-compliance to AMS elements. Interventions are made by the pharmacist, clinical/clinical practice pharmacist or nurses to address the following:

- Surgical prophylaxis not stopped
- Upon reaching day seven of antimicrobial therapy, treatment was not stopped or altered
- Microbiology testing not requested
- Doctor failed to review microbiology results to consider adjusting treatment
- IV hang time was within an hour of prescription
- There was no step down from IV to oral administration, when appropriate for patient
- Inappropriate daily dose (dosage and frequency)
- Duplication of antimicrobial spectrum
- More than four antimicrobials prescribed simultaneously

Methodology

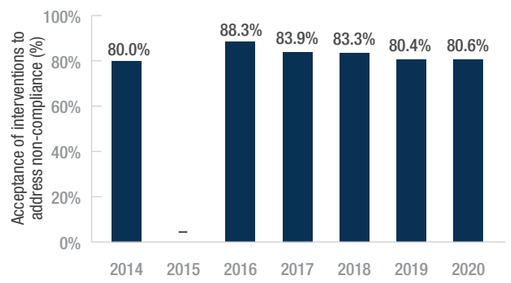
(Total number of interventions accepted by doctors/total number of interventions accepted)*100

↑ A higher percentage shows improved acceptance of interventions.

At the beginning of our AMS journey, the interventions were more straightforward and a slightly higher acceptance percentage was achieved. As the programme evolved and prescribing practices changed, the remaining intervention-types required to be made were the more complex ones, resulting in a slight decline in doctor acceptance, although the 80% target was still met.

As the AMS programme progressed, fewer interventions needed to be suggested on bundle elements not compliant to core AMS principles. Less non-compliant bundle elements upon initial assessment resulted in improved bundle compliance.

Life Healthcare acceptance of interventions to address non-compliance 2014 – 2020

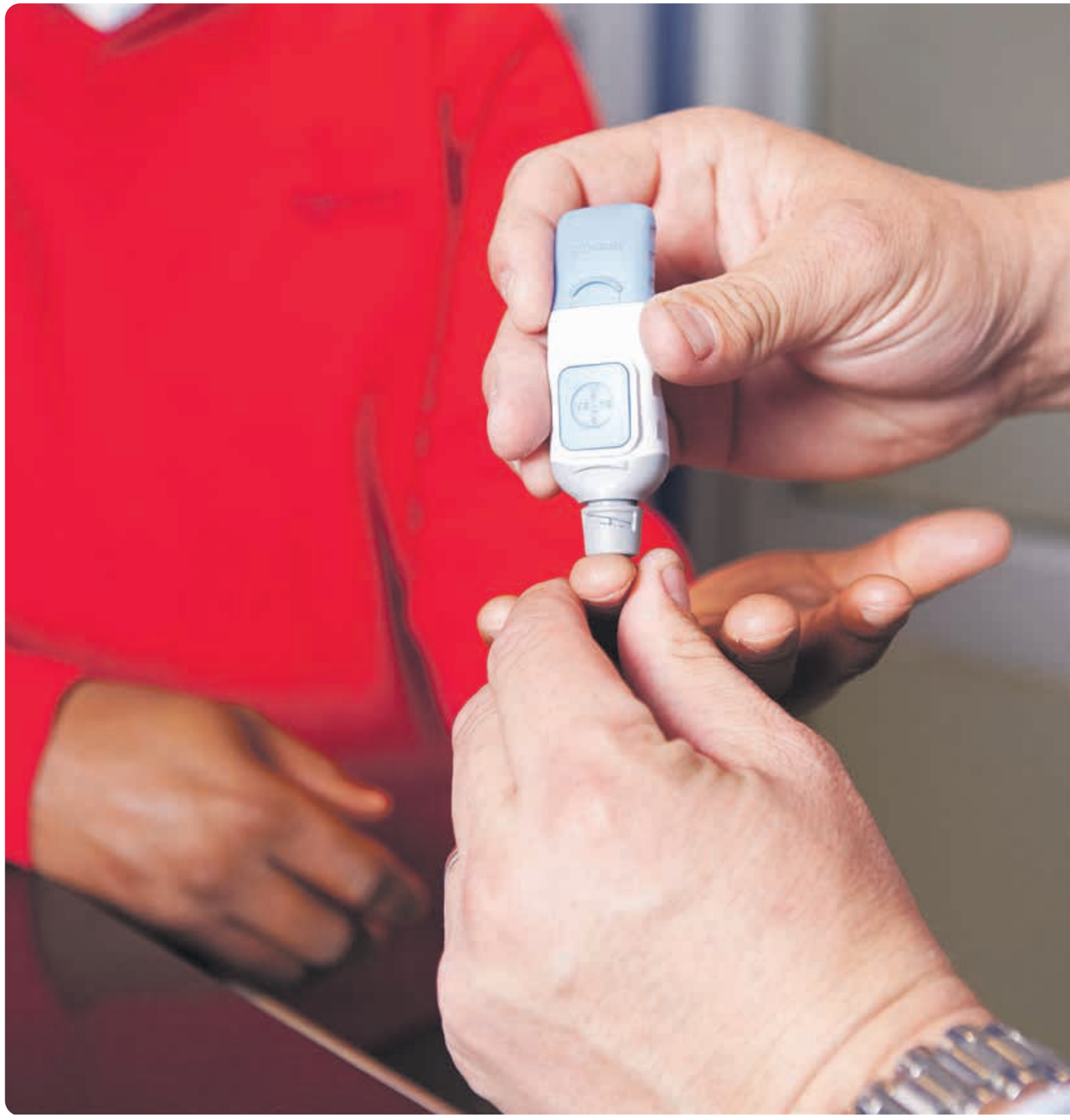


Additional AMS KPIs

C.difficile infections significantly impact patient outcomes in that once they occur, 50% of patients develop recurrent infections and often require hospitalisation. C. difficile spores are problematic in a hospital environment because they spread easily on surfaces and linen. Antimicrobial overuse is a risk factor for C. difficile infections. A decrease in antimicrobial use could contribute to the decrease in C. difficile infections in conjunction with stringent infection prevention practices in hospitals and facilities.

Due to an alarming increase in carbapenem resistance rates, our stewardship is focused now more than ever on reducing the inappropriate use of last-line antibiotics such as carbapenems. Inappropriate antimicrobial use is one of the key contributors to antimicrobial resistance. We therefore measure the overall injectable antibiotic load.

KPI	Definition	Methodology
• C.difficile infection rate	• Measures the C. difficile infections of patients admitted in hospital (positive clinical specimens)	• Number of C.difficile infections/ PPDs*1 000
• Carbapenem load	• Measures the usage of carbapenems in hospital	• Total number of vials used/ antimicrobial containing PPD
• Overall injectable antibiotic load	• Number of injectable antibiotic units used per antimicrobial-associated PPD	• Total number of vials used ÷ antimicrobial containing PPD



MAKING LIFE BETTER FOR OUR PATIENTS continued

CARE OF THE NEWBORN ENHANCED CARE DELIVERY MODEL

Enhanced neonatal care

Launched: 2015

The challenge

The field of obstetrics and newborn care is an important and high-cost area of litigation for hospital groups and individual obstetricians. Therefore, there are sound business reasons for focusing on the care of mother and baby in close collaboration with doctors.

The objective

The programme aims to reduce the number of neonatal deaths and complications.

Our approach and measures

In 2014, Life Healthcare implemented an international measure of quality of neonatal care known as the Vermont Oxford Network (VON), aimed at interventions to improve outcomes in very low-birth-weight infants. Through the VON, perinatal mortality rates and institutional maternity mortality ratios are measured and compared against international benchmarks.

We adopted the South African Society of Obstetricians and Gynaecologists BetterObs programme in 2015, and the programme was rolled out to all maternity units in 2017.

In 2018, we surveyed 28 neonatal ICUs on the promotion of breastfeeding and the use of donor-expressed breast milk. It was found that, while all surveyed neonatal ICUs promoted breastfeeding, only 16 used donor-expressed breast milk. We also found that documentation on donor-expressed breast milk was not standardised. As a result, we developed a standardised breast milk/donor-expressed breast milk protocol.

Measurable results and outcomes

Number of Life Healthcare neonatal ICUs registered on VON

Definition
Registration on the VON database.

Methodology
As per the assigned VON centre number and database rules

↑ A higher number implies improvement.

Since inception, we have seen a threefold increase in registered facilities due to active engagements with paediatricians and neonatologists at Life Healthcare neonatal ICUs, as well as training workshops and an annual symposium. The Life Healthcare medico-legal forum noted a marked reduction in claims related to neonatal ICU adverse events since inception of the programme.

2015	2016	2017	2018	2019	**2020**
8	22	22	23	24	**25**

Percentage of Life Healthcare neonatal ICU admissions captured on VON

Definition
Percentage of neonatal ICU admissions captured on VON.

Methodology
(Number of neonatal ICU admissions captured on VON/ number of neonatal ICU admissions captured on the Life Healthcare system for the 25 neonatal ICUs registered on VON)*100

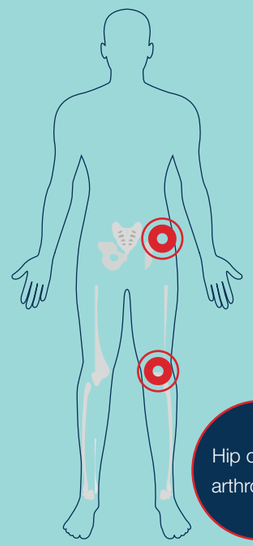
↑ A higher number implies improvement.

2015	2016	2017	2018	2019	**2020**
–	38.00	47.00	99.00	90.00	**92.00**

"OVER THE PAST THREE YEARS WE HAVE SEEN A NOTICEABLE DROP IN BOTH INFECTION AND MORTALITY RATES FOR NEWBORNS THROUGH CONTINUOUS QUALITY IMPROVEMENT IN PARTNERSHIP WITH LIFE HEALTHCARE. THE ANNUAL CARE OF THE NEWBORN SYMPOSIUMS, WHICH ALLOW FEEDBACK TO THE LIFE HEALTHCARE UNITS AS WELL AS VALUABLE TEACHING AND PLANNING OPPORTUNITIES ARE OF PARTICULAR VALUE. THE BIGGEST BENEFICIARIES ARE THE TINY INFANTS WHOSE LIVES ARE IN OUR HANDS."

– DR. LLOYD TOOKE, PAEDIATRICIAN AND NEONATOLOGIST, GROOTE SCHUUR HOSPITAL

MAKING LIFE BETTER FOR OUR PATIENTS continued



Measurable results and outcomes
30-day hip re-admission rates

Definition

The percentage of patients who underwent hip replacement surgery (arthroplasty) and were re-admitted to a Life Healthcare facility within 30 days for any cause.

Methodology

The percentage of total patients who underwent a hip arthroplasty procedure at a Life Healthcare facility and were subsequently re-admitted within 30 days of surgery for any cause (related or unrelated to the surgery).

Ideally, re-admission rates should be below the industry benchmark. Life Healthcare re-admission rates are consistently below industry benchmark.

MAJOR JOINTS FOR LIFE PROGRAMME

Improved quality care for hip or knee arthroplasty surgery patients

Launched: 2018

The challenge

In elective total hip or knee arthroplasty surgery, the patient profile is often that of an elderly patient with a long-standing history of crippling and debilitating osteoarthritis. It is also not uncommon to identify at least one co-morbid, non-communicable illness.

The period from the time of diagnosis to rehabilitation can be daunting, and therefore requires proper planning with multi-disciplinary, integrated patient-centred care.

The objective

Major Joints for Life is a multi-disciplinary approach to hip or knee arthroplasty surgery, providing patients with an improved clinical treatment solution.

Effective execution of the clinical pathway mitigates the possibility of the patient developing intra-operative complications and expedites both post-operative recovery and rehabilitation.

Our approach and measures

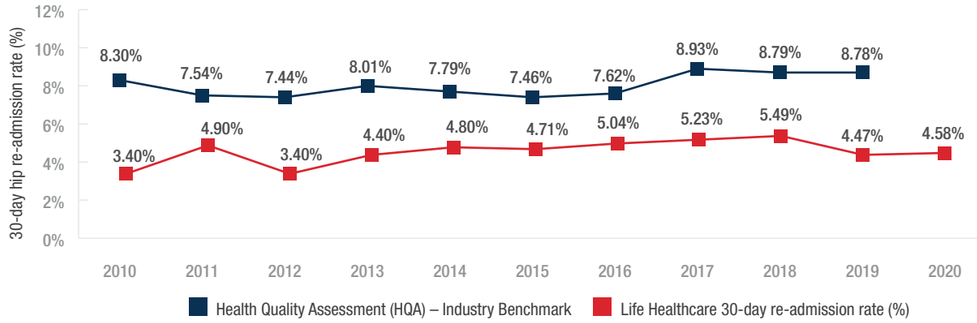
This programme measures quality from the patients' perspective for hip and knee replacement surgeries, using the Hip Osteoarthritis Outcomes Score (HOOS) and Knee Osteoarthritis Outcomes Score (KOOS). Patient-reported outcomes data is used to determine patients' perception of the success of an operation in terms of its impact on their self-reported symptoms and functional status.

The Major Joints for Life pathway consists of three crucial elements:

- Consultations with the necessary clinicians, such as an orthopaedic surgeon, anaesthetist and physiotherapist
- Hospital admission, including surgery
- Post-discharge assessments, which are telephonic follow ups six months post-surgery for hip or knee replacements, using an internationally accepted rating system of the surgery's outcome to perform the assessment

We also measure all-cause 30-day re-admission rates, and one-year condition-specific re-admission rates. The feedback and comparative data can be used by surgeons in assessing their performance and establishing perceived levels of quality and performance.

Life Healthcare 30-day hip re-admission rate 2010 – 2020



Measurable results and outcomes
30-day knee re-admission rates

Definition

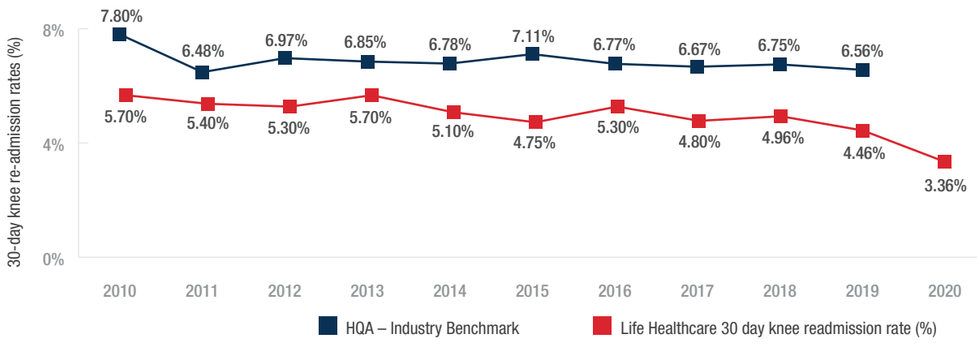
The percentage of patients who underwent knee replacement surgery (arthroplasty) and were re-admitted to a Life Healthcare facility within 30 days for any cause.

Methodology

The percentage of total patients who underwent a knee arthroplasty procedure at a Life Healthcare facility and were subsequently re-admitted within 30 days of surgery for any cause (related or unrelated to the surgery).

Ideally, re-admission rates should be below the industry benchmark. Life Healthcare re-admission rates are consistently below industry benchmark.

Life Healthcare 30-day knee re-admission rate 2010 – 2020



MAKING LIFE BETTER FOR OUR PATIENTS continued

One-year hip-specific re-admission rates

Definition

The percentage of patients who underwent hip replacement surgery (arthroplasty) and were re-admitted to a Life Healthcare facility within one year for causes related to the same site of surgery.

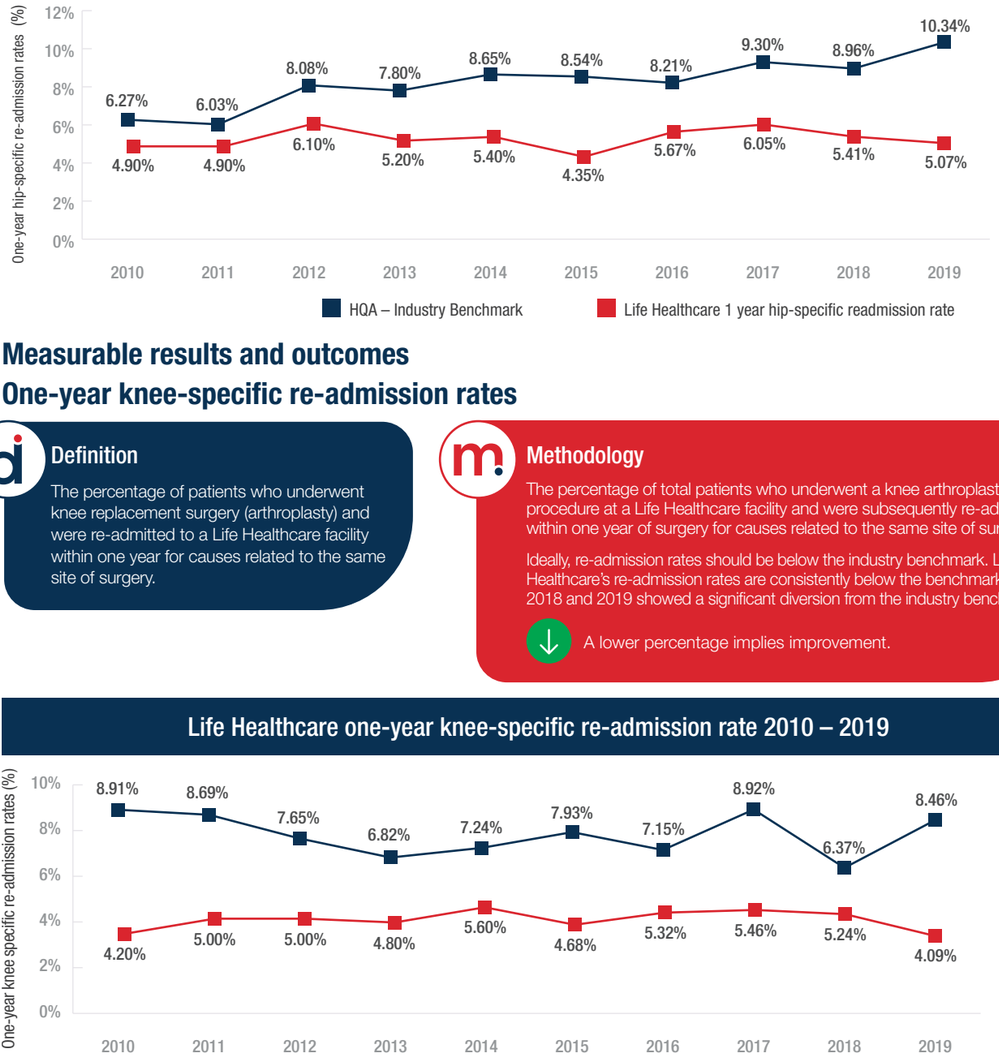
Methodology

The percentage of total patients who underwent a hip arthroplasty procedure at a Life Healthcare facility and were subsequently re-admitted within one year of surgery for causes related to the same site of surgery.

Ideally, re-admission rates should be below the industry benchmark. Life Healthcare's re-admission rates are consistently below the benchmark and in 2018 to 2019 showed a significant diversion from the industry benchmark, which is expected to continue in 2020.

↓ A lower percentage implies improvement.

Life Healthcare one-year hip-specific re-admission rate 2010 – 2019



Measurable results and outcomes

One-year knee-specific re-admission rates

Definition

The percentage of patients who underwent knee replacement surgery (arthroplasty) and were re-admitted to a Life Healthcare facility within one year for causes related to the same site of surgery.

Methodology

The percentage of total patients who underwent a knee arthroplasty procedure at a Life Healthcare facility and were subsequently re-admitted within one year of surgery for causes related to the same site of surgery.

Ideally, re-admission rates should be below the industry benchmark. Life Healthcare's re-admission rates are consistently below the benchmark and in 2018 and 2019 showed a significant diversion from the industry benchmark.

↓ A lower percentage implies improvement.

Life Healthcare one-year knee-specific re-admission rate 2010 – 2019

Average length of stay (LOS) for hip and knee arthroplasty

Definition

The average LOS for patients undergoing hip or knee surgery and reviewed against the industry benchmarks for LOS.

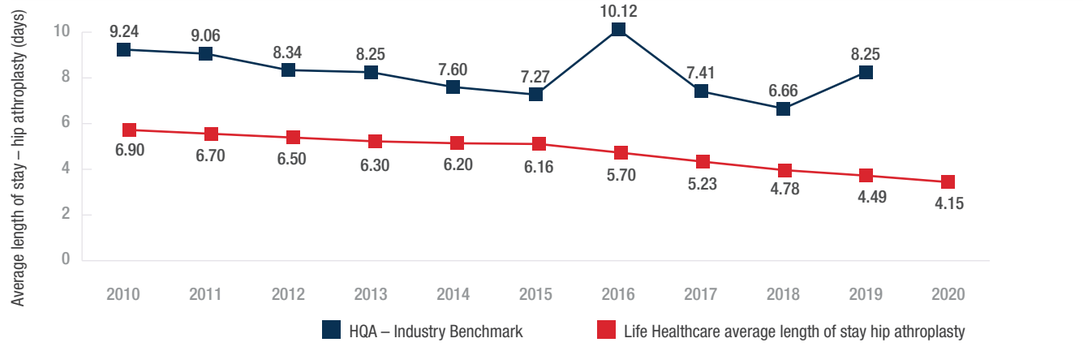
Methodology

The average number of days that a patient who underwent hip or knee arthroplasty was admitted to a Life Healthcare facility versus the industry benchmark.

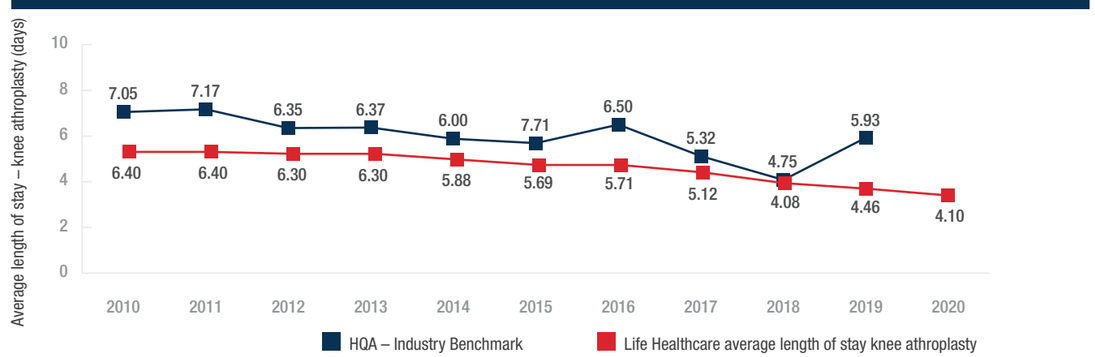
Ideally, the average LOS should be below the industry benchmark. Life Healthcare's average LOS rates are consistently below the benchmark for hip arthroplasty and tracking similar to the industry benchmark for knee arthroplasty.

↓ A lower percentage implies improvement.

Life Healthcare average length of stay – hips 2010 – 2020



Life Healthcare average length of stay – knees 2010 – 2020



MAKING LIFE BETTER FOR OUR PATIENTS continued

BLOOD GAS POINT OF CARE CONVENIENCE

Due to the rising costs of pathology, Life Healthcare introduced and implemented point of care testing for arterial blood gas in 2013.

Along with various vital signs such as blood pressure, heart rate and rhythm, temperature and respiratory rate, some biochemical markers reflect rapid changes when a patient becomes unstable. Given that "time is life", testing, diagnosing, and treating improves patient care. The measurement of arterial blood gas is common in clinical practice, and is essentially in the toolkit of point of care assessments. Sensors to measure blood gases, electrolytes and metabolites are easy-to-use, automated, and low maintenance: ideal for rapid, reliable, reproducible measurements.

Leaps in technology have made point of care testing instrumentation compact, portable, self-contained, and user-friendly, requiring only small sample volumes. Today, the Group operates 156 Siemens RAPIDPoint 500 blood gas machines at 41 facilities in casualties, ICUs (adult and neonatal) and theatres.

Point of care testing is essential for patient care in emergencies, where time is of the essence and delays in diagnosis and stabilisation mean the difference between life and death. A rapid understanding and correction of physiological imbalances support quick decision-making in emergency settings and critical-care units, such as adult and neonatal intensive care environments. A slight deviation in biochemical and haematological markers can pinpoint decompensation or recovery. Studies show that point of care testing has the advantage of providing reduced therapeutic turnaround time, shorter door-to-clinical-decision time, rapid data availability, reduced pre-analytic and post-analytic testing errors.[1,2]

To maintain the commitment to providing quality, Life Healthcare has undertaken to ensure that Life Blood Gas Services aligns to the requirements in ISO 22870, ISO 15189 and Good Laboratory Practice.

1 *Kapoor D, Srivastava M, Singh P. Point of care blood gases with electrolytes and lactates in adult emergencies. Int J Crit Illn Inj Sci. 2014 Jul-Sep; 4(3):216-222*

2 *Louie R, Tang Z, Shelby D et al. Point-of-care testing: Millennium technology for critical care. Lab Med. 2000; 31(7): 402-408*

LIFE RENAL DIALYSIS

Life Healthcare has a national footprint of 30 dialysis facilities, which are nephrologist-led, providing outpatient-based chronic dialysis, inpatient-based acute renal dialysis or home-based peritoneal dialysis for patients with renal failure.

Out-of-hospital treatment

- Chronic haemodialysis treatment uses a dialysis machine to remove waste products, excess salt and fluids from the blood of patients diagnosed with chronic kidney disease.

In-hospital treatments

- Acute haemodialysis (administered to patients diagnosed with acute kidney disease)
- Slow continuous therapy, renal replacement therapy, or haemodialysis are usually administered to critically ill patients for up to 24 hours a day, and for extended periods.
- Plasmapheresis is a blood purification procedure used to treat several autoimmune diseases, also known as plasma exchange

Home-based treatments

- Continuous ambulatory peritoneal dialysis, a process in which a bag of dialysis fluid is drained into the peritoneal cavity through a special catheter. The fluid is left inside the body for some time to absorb excess salt and waste products and is then drained out.
- Automated peritoneal dialysis is similar to continuous ambulatory peritoneal dialysis, however the exchanges occur while a patient is asleep and with the help of a "cycler" machine.

Timeline: Life Renal Dialysis since 2003

2003 – 2013

- 2003 – Life The Glynnwood
- 2009 – Life Fourways Hospital
- 2009 – Life East London Private Hospital
- 2011 – Life Vincent Pallotti Hospital
- 2012 – Life Entabeni Hospital
- 2012 – Life Mercantile Hospital
- 2013 – Life Bedford Gardens Hospital
- 2013 – Life Mount Edgecombe Hospital
- 2013 – Life Rosepark Hospital
- 2013 – Life Carstenhof Hospital

2014 – 2015

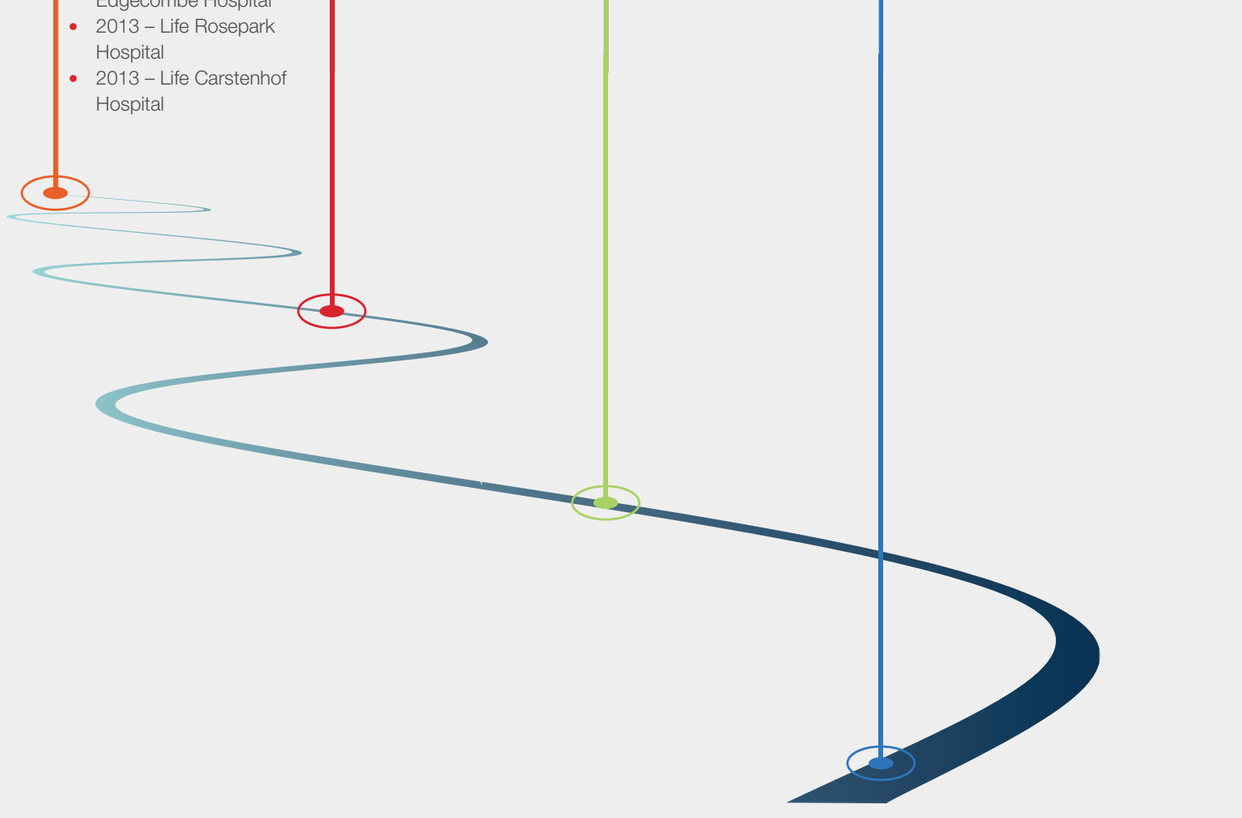
- 2014 – Life Chatsmed Gardens Hospital
- 2014 – Life Westville Hospital
- 2015 – Life Brenthurst Hospital
- 2015 – Life Gaborone Private Hospital
- 2015 – Life Groenkloof Hospital
- 2015 – Life Midmed Hospital
- 2015 – Life Hilton Hospital
- 2015 – Life Empangeni Private Hospital

2016 – 2017

- 2016 – Life Knysna Hospital
- 2016 – Life Wilgeheuwel Hospital
- 2017 – Life Queenstown Private Hospital
- 2017 – Life Robinson Private Hospital
- 2017 – Life Springs Parkland Hospital

2018 – 2020

- 2018 – Life Flora Hospital
- 2019 – Life Cosmos Hospital
- 2019 – Life St George's Hospital
- 2020 – Life Anncron Hospital



MAKING LIFE BETTER FOR OUR PATIENTS continued

HOLISTIC MENTAL HEALTHCARE

Life Mental Health

The right choice for acute mental healthcare

Life Healthcare is a leading provider of private psychiatric services in South Africa, with nine dedicated facilities situated across four provinces, namely: Gauteng, Eastern Cape, KwaZulu-Natal and Western Cape. Our treatment programmes facilitated by our multidisciplinary team have been developed to achieve optimal outcomes through the short-term treatment of mental healthcare users in tranquil and therapeutic environments conducive to recovery.

Our services

The mental healthcare services offered include general psychiatry, electroconvulsive therapy (ECT), treatment for substance dependence or other addictions associated with psychiatric disorders. We also offer specialised services to accommodate patients requiring assisted and involuntary care at most of our facilities. Treatments include evidence-based drug therapy, individual psychiatric consultations and psychotherapy, group therapy and, where needed, physical therapy. These holistic services are provided by a multidisciplinary team which, depending on individual patient needs, comprising of psychiatrists, psychologists, occupational therapists, physiotherapists, social workers and counsellors; as well as nursing practitioners trained in mental health.

Timeline: Life Mental Health since 1990

1990 – 1993
- 1990 – Life Riverfield Lodge
- 1993 – Life Hunterscraig Private Hospital

2006 – 2011
- 2006 – Life St Mark's
- 2011 – Life Glynnview
- 2011 – Life St Joseph's

2012-2016
- 2012 – Life Poortview
- 2016 – Life St Vincent's

2017 – 2019
- 2017 – Life Carstenview
- 2019 – Life Brackenview

Mental Health Landscape

Mental healthcare demand is on the rise globally due to multiple factors including economic and societal pressures, an increase in divisive news and the breakdown of family units and social support structures. In South Africa, the provision of affordable mental healthcare services was prioritised by government through the adoption of the National Health Insurance Policy (2017) and the National Mental Health Policy Framework and Strategic Plan (2013 to 2020). The focus is to organise mental health services and funding in a manner that is comprehensive and holistic, and inclusive of both inpatient and outpatient care.

The objective

The Life Healthcare mental health integrated care pathway aims to develop a continuum of care between inpatient and outpatient treatment that is holistic, measurable, and clinically and economically efficient.

Our approach

The programme ensures treatment according to evidence-based protocols that provide guidelines on the level of care, medication prescribed and readiness for discharge on a patient-by-patient basis.

Measurable results and outcomes

Mental health professionals are able to practise clinical autonomy at the point of care, providing quarterly insights into clinical and quality outcomes, which becomes a discussion about best practice.

The Mental Health Questionnaire 14 (MHQ-14) is an internationally recognised measure of patient-reported feedback while in a mental health facility. It is derived from the RAND 36-Item Short-Form Health Survey, to record variations in patient outcomes.

MHQ-14 efficiency

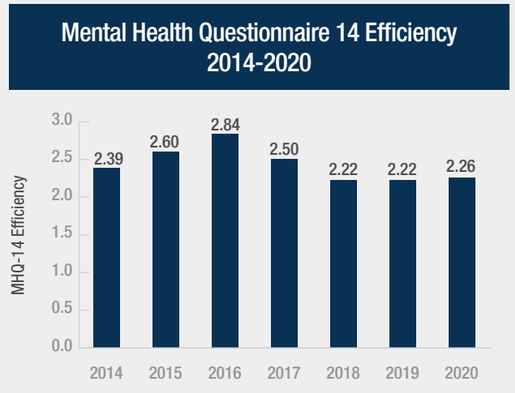
Definition

A patient self-reported outcomes measure which includes domains on vitality, social functioning, emotional functioning and general mental health.

Methodology

Efficiency is measured as the change between admission and discharge scores during the period of admission.

Our MHQ-14 efficiency over the past seven years has remained mostly above the target of 2.25.



MAKING LIFE BETTER FOR OUR PATIENTS continued

LIFE REHABILITATION

Functional Independence Measure™ (FIM™) and Functional Assessment Measure (FAM)

Life Rehabilitation is a certified licence holder for the FIM™ in South Africa, which allows us to evaluate the functional status of patients during their rehabilitation process. We use the FAM for cognitive, behavioural, communication and community functioning, which provides insight on patients with brain injuries.

We measure the clinical outcomes of each patient and track their overall progress to benchmark the performance of rehabilitation units. In this way, we can support patients' families and provide in-depth detail to healthcare funders during the rehabilitation process.

The FIM™ is an 18-item, seven-level, ordinal scale used by rehabilitation teams to assess and grade the functional status of a person based on the level of assistance he or she requires and includes self-care, including sphincter control, transfers, locomotion, communication, and social cognition. The FAM was developed as an adjunct to FIM™ to address functional areas of importance in brain injury rehabilitation that are less emphasised in FIM™, including 12 items related to communication, psychosocial adjustment, and cognition.

The FIM™ and FAM efficiency have changed since 2018 due to the change in patient profile, including an increase in medically complex patients. Future plans include outcomes reporting for specific impairment groups, e.g. stroke, amputation, etc. The 2020 outcomes capturing was impacted by system challenges.

FIM™ and FAM efficiency scores

Definition

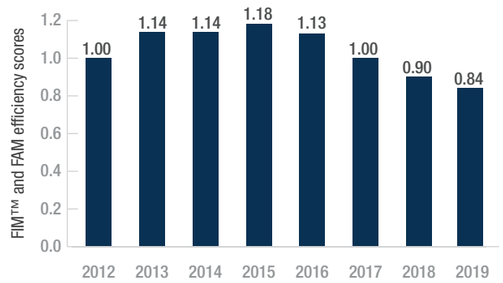
FIM™ and FAM efficiency indicates the change in patient status in response to a rehabilitation episode of care.

Methodology

(Discharge score-admission score)/Length of Stay

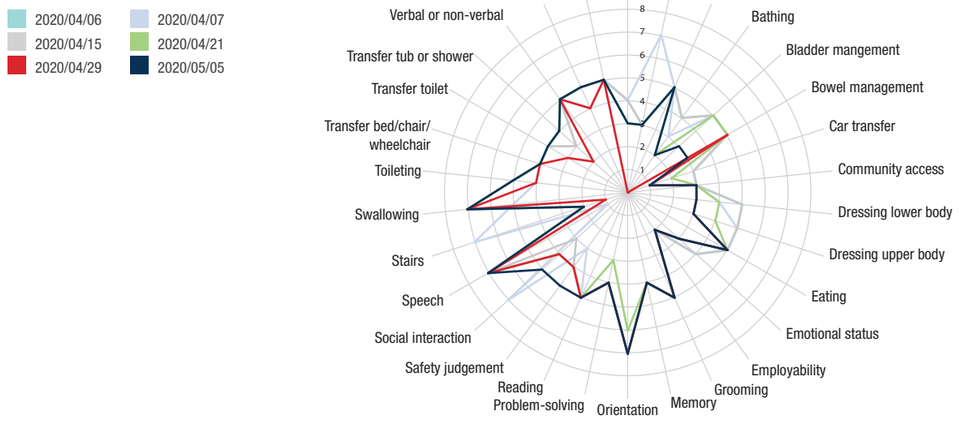
Higher number shows greater efficiency

FIM™ and FAM efficiency scores 2012 – 2019

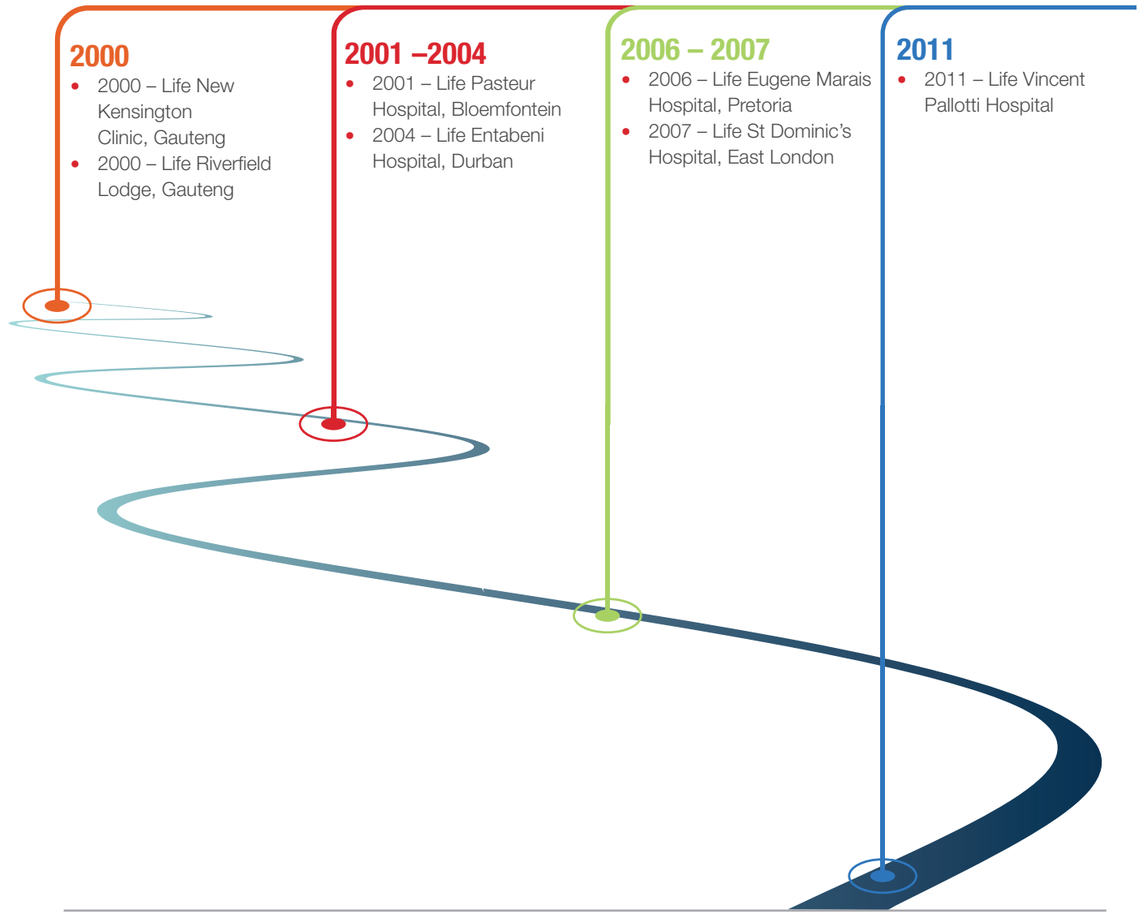


Rehabilitation

Example of FIM™ and FAM patient spidergraph



Acute Rehabilitation growth



MAKING LIFE BETTER FOR OUR PATIENTS continued

ACUTE MYOCARDIAL INFARCTION (AMI) BUNDLE

Cardiac excellence enhanced care delivery model

Launched: 2008

The challenge

An AMI or heart attack is caused by a sudden loss of blood supply to an area of the heart. This may result in permanent heart damage or death. Information published by the Heart and Stroke Foundation South Africa in 2007 states that between 1997 and 2004,195 people died daily because of some form of heart and blood vessel disease in South Africa and about 33 people died daily from heart attacks. Canada and the US report that of the millions of people diagnosed with an AMI each year, approximately one-third of patients die during the acute phase. There was a global drive for hospitals and facilities to work with clinicians to develop guidelines for care and to promote awareness of evidence-based practices in the clinical community.

The objective

To reduce death and disability following an AMI by adhering to international clinical-proven best practice for treatment.

The AMI bundle comprises a number of clinical management interventions for patients with acute chest pain coming into our cardiac facilities.

The programme has at its foundation the work done by the Institute for Healthcare Improvement, Canadian Safer Healthcare Now! AMI campaigns and the American Alliance for Cardiac Care Excellence. This is based on leading healthcare organisations partnering with international cardiologists to ensure that every hospitalised patient suffering from AMI receives the right care, at the right time, every time.

The death rate and other complications from an AMI can be reduced by timeous implementation of internationally recognised clinical best practice that will:

- Restore blood flow to the affected area, minimising damage to the heart muscle
- Limit strain on the heart
- Limit further coronary artery disease

Our approach and measures

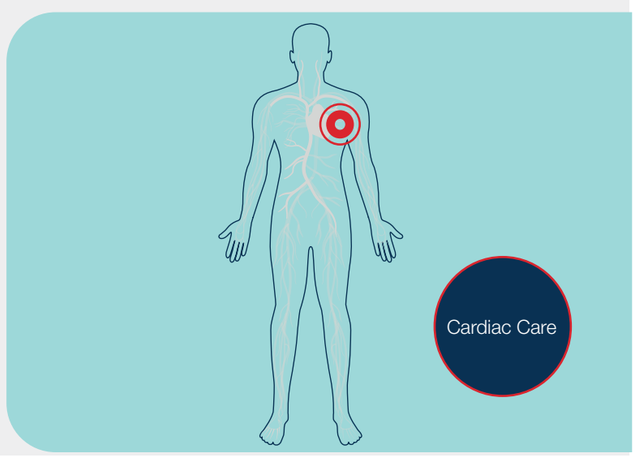
Studies show that AMI patients should receive specified components of care to reduce morbidity and mortality. The type of care patients receive during and after hospitalisation may vary depending on their clinical condition and other co-morbidities. However, there is strong evidence to support that the following care components should be provided to all AMI patients to improve their outcome:

- Performance of an electrocardiogram
- Administration of aspirin on arrival
- The use of beta-blockers or angiotensin-converting enzyme inhibitors
- The infusion of antithrombotic agents in eligible patients who do not have immediate access to a cathlab and cardiologist
- Performance of a percutaneous coronary intervention (PCI) in a cardiac catheterisation laboratory
- Prescribing aspirin, beta-blockers and statins on discharge
- Smoking cessation counselling

Documenting compliance and ensuring effective data collection across multiple points of the intervention steps presented a significant challenge. For example, while aspirin on arrival was recorded at less than 30% compliance at the start of the project, a large proportion of non-compliance was due to poor data collection rather than actual non-compliance.

To address this challenge, AMI champions were appointed at each acute Life Healthcare facility to facilitate complete and accurate data capture and train employees in the management and co-ordination of AMI patients.

We also introduced the Infoquest platform which enables accurate reporting of bundle compliance through automated recording of data per the patient report for all AMI cases.



Measurable results and outcomes

Over the past 10 years, the AMI bundle programme has helped to standardise approaches to AMI management and allow for measurement of compliance with the AMI bundle and outcomes.

In September 2010, a formal evaluation of the impact of the AMI bundle was performed on the approximately 2 400 AMI patients whose records were captured. The aim was to determine if adherence to the AMI bundle had any effect on AMI mortality. Due to the benefit of the AMI bundle in cathlab facilities, it was rolled out to all acute Life Healthcare facilities.

For all KPIs, lower overall compliance in feeder hospitals indicates a potentially poorer adherence to evidence-based guidelines, but could also be due to inadequate reporting. Over time, the implementation of the AMI bundle in feeder hospitals improved with ongoing training on acute coronary syndrome management and better reporting and data capturing.

Lower compliance at feeder hospitals could also indicate less timely cardiologist consultation and transfer to cathlab hospitals for further management under the care of a cardiologist, even if that patient may not be eligible for immediate thrombolytic therapy. There is consistently good compliance to the administration of medications at discharge, as it is managed by cardiologists. With the implementation of the AMI bundle, the need for a standardised clinical algorithm to align the acute management of AMIs across both cathlab and feeder hospitals was recognised. The opportunity was also evident to include the acute management of non-ST elevation acute coronary syndromes to ensure the appropriate management of this subset of patients.

A basic acute coronary syndrome algorithm was thus compiled incorporating the latest clinical evidence and in consultation with a Life Healthcare cardiologist clinical review panel. This guideline will primarily guide acute reperfusion management and referral of patients with an acute coronary syndrome and will be applicable to both feeder and cathlab hospitals. The revised acute coronary syndrome algorithm will be introduced with the revised patient data collection system as part of the expanded Cardiac Excellence Enhanced Care Delivery Model implementation.

Aspirin given on arrival (%)

Definition

Administer antiplatelet drug to prevent blood clot formation within 30 minutes from arrival, e.g. aspirin, Disprin, Ecotrin, Plavix, Integrilin, except when contra-indicated.

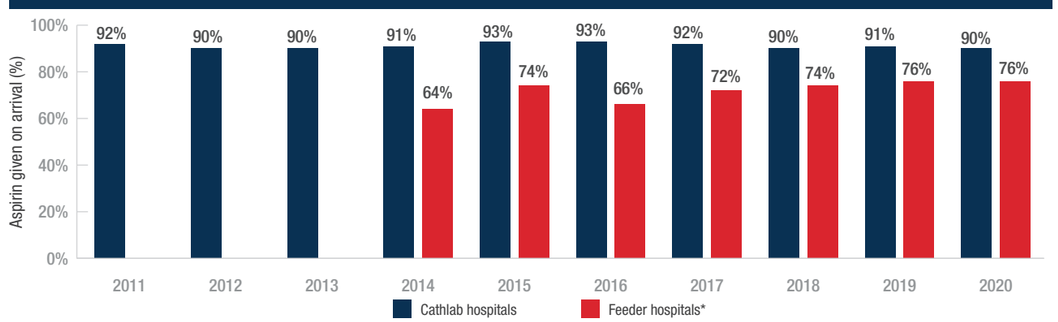
Methodology

Total number of AMI patients who received aspirin within 30 minutes/total number of AMI cases*100

↑ A higher number implies improvement.

The statistics provided below do not reflect all clinical situations, for example, if a patient received aspirin from first responder or out-of-hospital environment. Addressing these anomalies is part of the next phase of revised clinical algorithms and revised data recording initiatives.

Life Healthcare aspirin given on arrival 2011 – 2020



* Data not available for feeder hospitals prior to 2014

MAKING LIFE BETTER FOR OUR PATIENTS continued

Beta-blockers given within 24 hours of arrival (%)

Definition

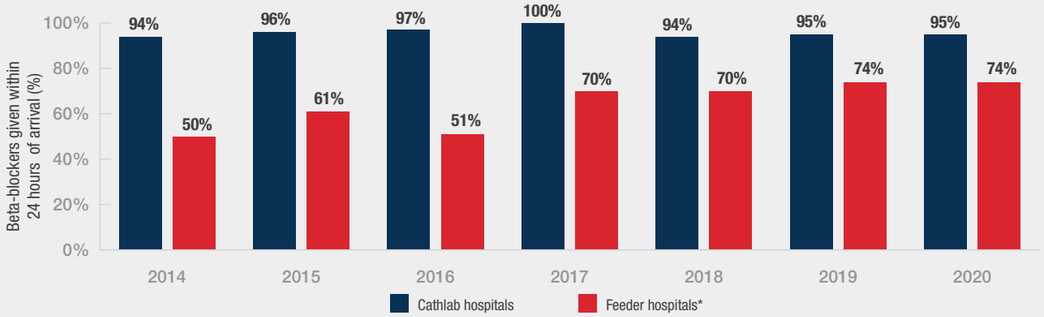
Administer beta-blocker to lower or control blood pressure and prevent ventricular arrhythmias within 24 hours, e.g. Atenolol, Ten-Bloka, Inderal, except when contra-indicated.

Methodology

Total number of AMI patients who received beta-blockers within 24 hours/total number of AMI cases*100

↑ A higher number implies improvement.

Life Healthcare beta-blockers given within 24 hours of arrival 2011 – 2020



* Data not available for feeder hospitals prior to 2014

Thrombolytic within 30 minutes of arrival (%)

Definition

For cathlab hospitals: thrombolytic therapy commenced within 30 minutes, to dissolve blood clots, restoring blood flow, except where contra-indicated.

For feeder hospitals: thrombolytic therapy commenced within 30 minutes, to dissolve blood clots, restoring blood flow, except where contra-indicated.

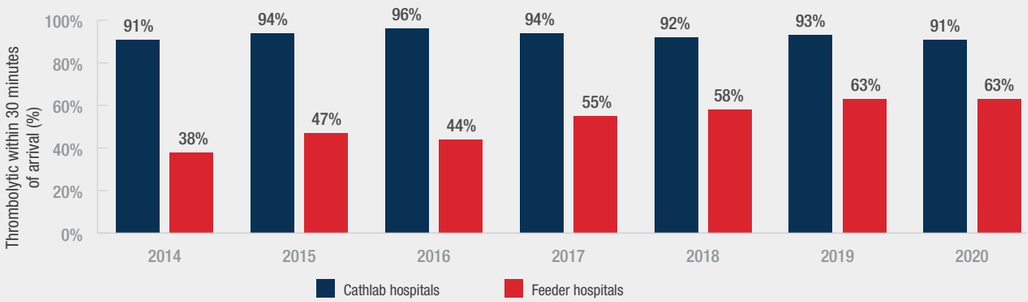
Methodology

Total number of AMI patients who received thrombolytic within 30 minutes/total number of AMI cases*100

↑ A higher number implies improvement.

The declining trend in compliance at cathlab facilities is attributable to a range of factors which will be addressed by implementing a revised algorithm.

Life Healthcare thrombolytic within 30 minutes of arrival 2014 – 2020



Data only available from 2014

PCI <90 minutes (%)

Definition

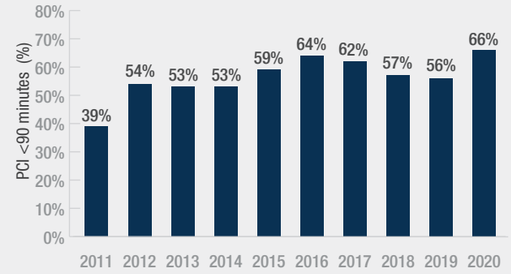
PCI, e.g. angioplasty or stenting of the coronary arteries within 90 minutes from admission with an AMI.

Methodology

Total number of AMI patients who underwent PCI within 90 minutes/total number of AMI cases*100 (cathlab hospitals only)

↑ A higher number implies improvement.

Life Healthcare PCI <90 minutes 2011 – 2020



Compliance scores are impacted by structural and operational constraints of cathlabs and cardiologist availability to ensure a PCI within 90 minutes at some hospitals, especially after hours. This correlates to the high number of primary thrombolytic administration at cathlab hospitals followed by a PCI within 24 hours, as opposed to primary PCI within 90 minutes.

Beta-blockers on discharge (%)

Definition

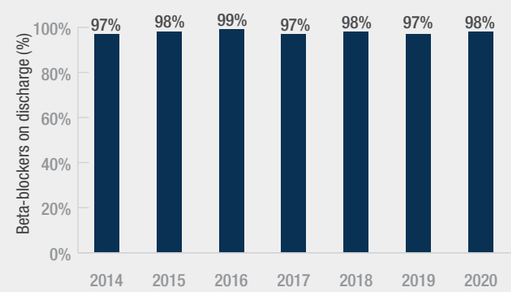
Beta-blocker prescribed for home use, e.g. Atenolol, Ten-Bloka, Inderal, except when contra-indicated.

Methodology

Total number of AMI patients who were discharged with beta-blockers ÷ total number of AMI cases x 100 (cathlab hospitals only)

↑ A higher number implies improvement.

Life Healthcare beta-blockers on discharge 2014 – 2020



Data only available from 2014

Aspirin given on discharge (%)

Definition

Anti-platelet drug is prescribed for home use e.g. aspirin, Disprin, Ecotrin, Plavix, Integrilin

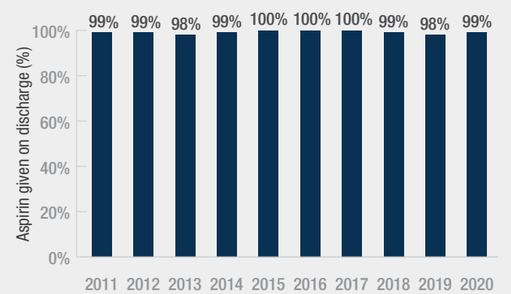
* *except when contra-indicated*

Methodology

Total number of AMI patients who were discharged with aspirin ÷ total number of AMI cases x 100 (cathlab hospitals only)

↑ A higher number implies improvement.

Life Healthcare aspirin given on discharge 2011 – 2020



Performance shows bundle compliance above 95% consistently. The noted variability is likely due to medication not being indicated or being contra-indicated.

MAKING LIFE BETTER FOR OUR PATIENTS continued

Statin on discharge (%)

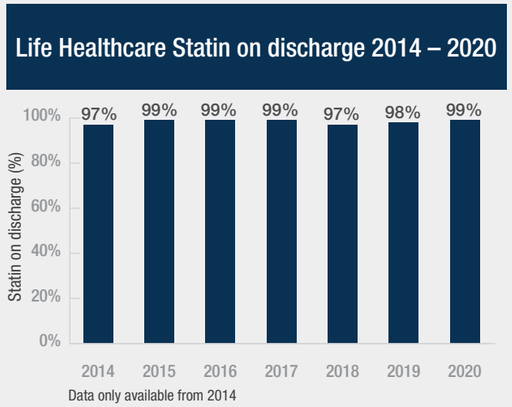
Definition

This refers to Statin prescribed for home use to reduce cholesterol levels e.g. Lipitor, Lescol, Lovacol

Methodology

Total number of AMI patients who were discharged with Statin ÷ total number of AMI cases X 100 (cathlab hospitals only)

↑ A higher number implies improvement.



Performance shows bundle compliance above 95% consistently. The noted variability is likely due to medication not being indicated or being contra-indicated.

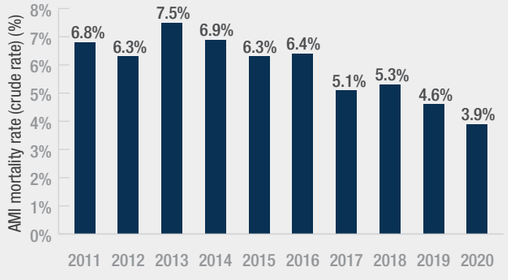
AMI mortality rate (crude rate) (%)

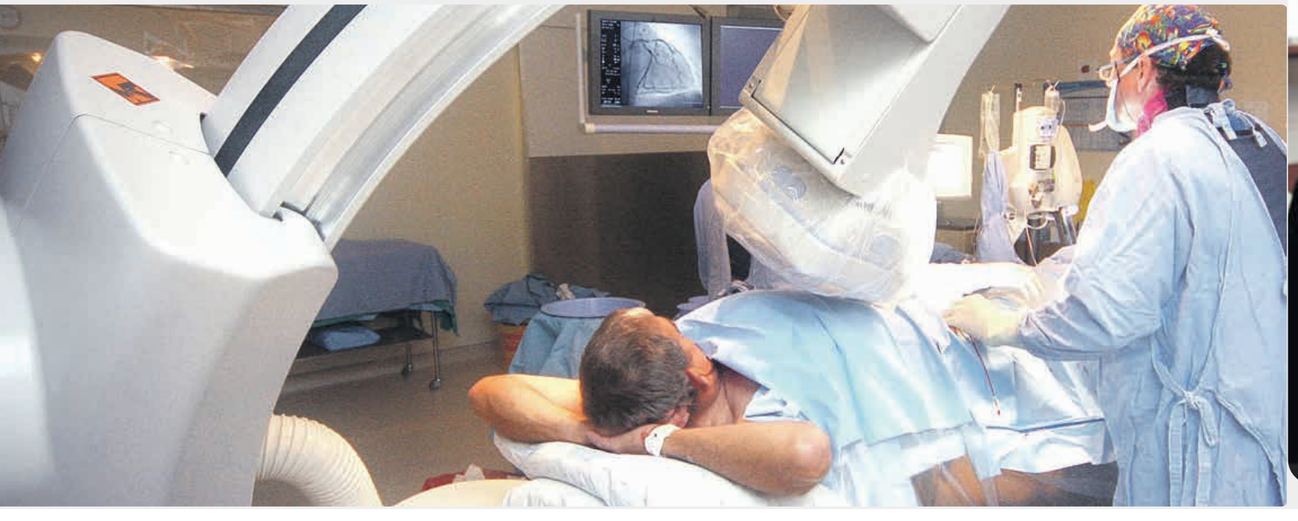
Definition

Percentage of total deceased patients, while in hospital coded with AMI (cathlab hospitals only).

↓ A lower number implies improvement.

This is the clinical outcome measure of the AMI bundle and incorporates the impact of all clinical interventions on the AMI crude mortality rate. Significant improvement is noted since inception.





SPOTLIGHT ON CLEANLINESS PROGRAMME

An improvement in microscopic cleanliness

Launched: 2016

The challenge

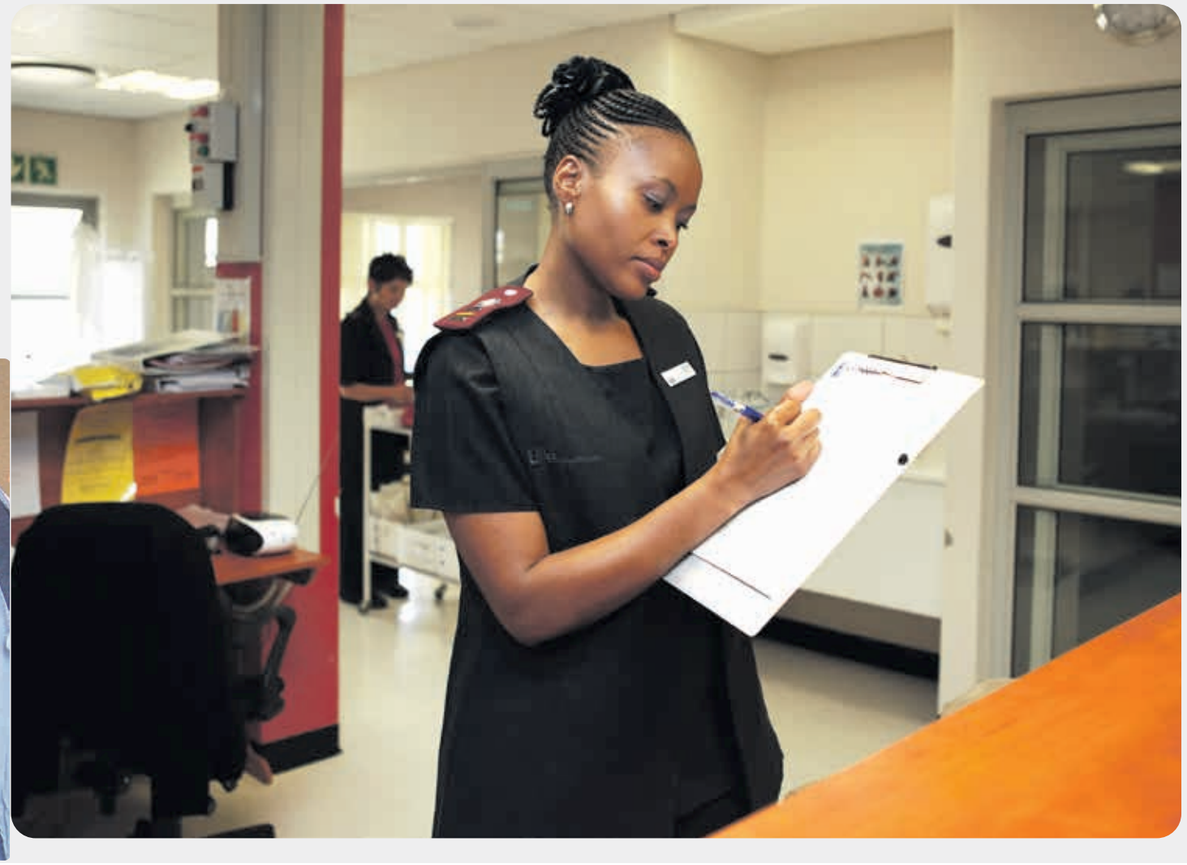
A lack of cleanliness at visual and microscopic level is an infection risk and could lead to negative perceptions of our facilities and damage the Group's reputation.

The objective

The programme focuses on patient care areas, with specific reference to 20 high-touch areas such as door handles, bed rails and drip stands. The aim is to ensure that high-touch areas are properly cleaned on both a visual and microscopic level.

Our approach and measures

Adherence is measured monthly and reported on monthly by an infection prevention specialist at each hospital or facility. This information is shared with departments internally and with outsourced providers (specifically cleaning companies), to improve cleanliness and reduce the risk of infection. We developed a simple, cost-effective and objective measure of non-visible cleanliness to establish baseline compliance, raise awareness on the importance of cleanliness and ensure improvement over time. The process uses a luminescent stamp and an ultraviolet torch. The torch, when shone onto the luminescent ink, causes it to fluoresce, mimicking microbes that are not visible to the human eye. After cleaning, an area will only fluoresce where cleaning has been missed. The process is measured as a percentage. There are individual audit diagrams for theatres, general wards and ICUs. The programme has also been rolled out to renal dialysis, mental health and rehabilitation units.



MAKING LIFE BETTER FOR OUR PATIENTS continued

Recognition for the IPC department was received from HASA. This national award was aimed at the private sector for exceptional achievement in the area of quality improvement initiatives.

This Life Healthcare initiative was published as a journal article and presented in the format of a poster presentation at various conferences.

Measurable results and outcomes
Spotlight on cleanliness – general (92%)

Definition

Monthly audits: for 10% of all hospital beds per unit, five random high-touch areas are selected and measured. The areas include both high and non-high-technology equipment and surfaces e.g. monitors, bed rails, beds, light switches, door handles etc. The rehabilitation general units have been added to this measure with a rehabilitation-specific diagram.

Methodology

Compliance calculated as a percentage of the five selected areas that had been adequately cleaned (e.g. 4/5 = 80% compliance)

↑ A higher number implies improvement.

Spotlight on cleanliness – theatre and ICU (95%)

Definition

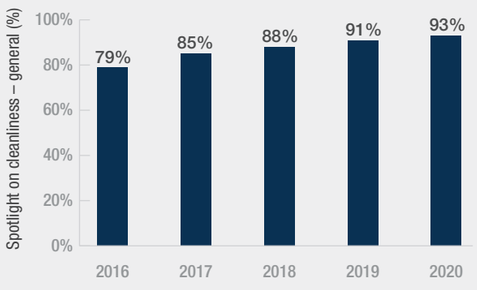
Monthly audits: 10% of all theatres and ICUs are audited. Five random high-risk areas are selected and measured. The areas include both high and non-high-technology equipment and surfaces, e.g. drip stands, kick abouts, neck supports/head rests, arm rests, roller boards/ patient slides, light switches, patient straps, trolleys, trolley wheels, theatre lights, booms/arms, stools/steps, theatre beds, etc. The mental health ECT theatre has been added to this measure with an ECT-specific diagram.

Methodology

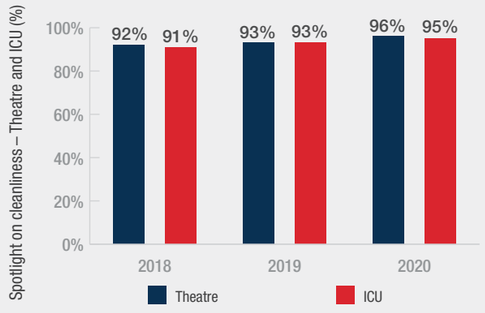
Compliance calculated as a percentage of the five selected areas that had been adequately cleaned (e.g. 4/5 = 80% compliance)

↑ A higher number implies improvement.

Life Healthcare spotlight on cleanliness – general 2016 – 2020



Life Healthcare spotlight on cleanliness – theatre and ICU 2018 – 2020



MAKING LIFE BETTER FOR OUR PEOPLE

EMPLOYEE HEALTH AND SAFETY

The health and safety of our employees, both permanent and temporary, is an essential focus area at Life Healthcare. It is paramount for our employees to be healthy and feel safe in the workplace where they are our direct line to our patients. The outbreak of COVID-19 further highlighted the importance of protecting our employees.

Compliance to the OHS Act is seen as the minimum requirement for health and safety. The OHS Act and other legal requirements affecting employee health and safety are integrated into the Life Healthcare QMS, incorporated into our quality and environmental policies and form part of the annual auditing process.

Our employees play an integral role in creating and developing a safety culture at our facilities and contribute to a safe environment. Therefore, we nominate and train health and safety representatives and establish health and safety committees at all facilities. Representatives perform monthly inspections where hazards are reported and addressed. One of the key responsibilities of the health and safety committees is to escalate major risks to management for attention and action.

We drive preventative action through the risk assessment and alert reporting processes. All adverse events are reported, investigated, analysed and monitored to identify trends and to ensure the health and safety of our employees, patients, the public, equipment and property.

All reported adverse events are categorised according to severity and are reported at different levels within the Group – including the Group Chief Executive if required. This ensures that appropriate corrective action is taken.

Employee adverse events (per 200 000 labour hours)

Definition

Includes falling, mobility (strains/sprains), needle sticks/ sharps (body fluid/blood), cut/puncture (no body fluids), foreign object, stacking and storage, occupational health – infection related, occupational health other, burns, assault, motor-vehicle-related accident, equipment-related injury, injuries other, exposure to body fluid, attitude, behaviour, ethics and other.

Methodology

(Number of events/labour hours)*200 000

↓ A lower number implies improvement.

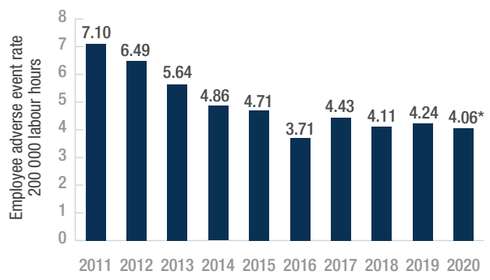
Employee adverse events – sharp injuries (per 200 000 labour hours)

The steady decrease in sharp injuries since 2012 can be attributed to:

- Sharp injury awareness campaigns in 2012
- Individual facilities conducting annual assessments of the root causes of injuries
- Two sharp injury awareness training DVDs were developed and distributed in 2013
- An awareness campaign titled “Zero sharp injury days” in 2018

The main contributor to reduced employee adverse events is the steady increase in preventative alerts.

Life Healthcare employee adverse events 2011 – 2020



** This does not include employee COVID-19 infections. Should employee COVID-19 infections be included this would increase to 12.63.*

Life Healthcare employee sharp injury adverse events 2011 – 2020

MAKING LIFE BETTER FOR OUR PEOPLE continued

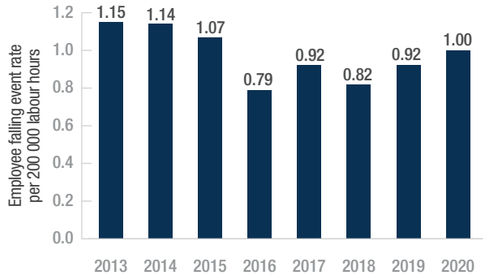
Employee adverse events – falling (per 200 000 labour hours)

The low rate in 2018 can be attributed to a drive to reduce slips on wet floors in operating theatres. Due to the increase in falls in 2019, there was a drive to ensure that the correct shoes were worn by employees to prevent falling. Talking on cell phones while walking was also discouraged. In 2020, the wearing of face masks attributed to the increase in employees falling because masks and visors hamper the ability to gauge distance, resulting in falling.

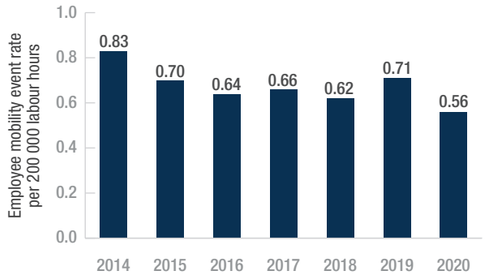
Employee adverse events – mobility (per 200 000 labour hours)

In 2018, there was a training initiative on patient handling and moving techniques, and information on back safety awareness was developed and distributed.

Life Healthcare employee falling rate 2013 – 2020



Life Healthcare employee mobility rate 2014 – 2020



NURSING

Nurses' role in quality at Life Healthcare

Nurses are at the forefront of delivering quality care and contributing to and championing new approaches to clinical and non-clinical quality initiatives. Their contributions are critical to Life Healthcare's purpose.

Through a commitment to compassionate nursing care, we have a positive impact on patients. Therefore, it is imperative for us to attract and retain skilled registered nurses.

Through implementing the initiatives discussed below, we have seen a decrease in the annual turnover rate of nurses over the 10-year period. Registered and specialised nurse turnover reduced from 23.9% in 2011 to 16.3% in 2020, with the turnover of qualified registered nurses working in specialised units decreasing from 21.1% in 2011 to 18.4% in 2020. Due to the shortage of specialised nurses, 28% of nurses in Life Healthcare facilities are temporary employees contracted through agencies. To ensure that nurses in temporary employment are committed to and understand the Group's quality standards, we reduced the number of agencies we use, from eight in 2011, to four in 2019. In 2020, this number increased to fourteen due to heightened demand caused by COVID-19.

We have comprehensive service-level agreements with these agencies, and share all Life Healthcare training materials with them. In addition, all newly appointed temporary nursing employees undergo our formal induction programme and are encouraged to access our continuous professional development courses.

Our nursing values

- Focusing on the personal needs of patients and their families
- Delivering excellent clinical care
- Trusting and encouraging each other as colleagues
- Providing the best clinical support

We reward and celebrate quality nursing

- An annual nurses' remuneration review is a priority to ensure we are rewarding at market-related rates.
- International Nurses' Day is one of the many occasions when Life Healthcare honours nurses for their quality and excellence in nursing. Before the day, our *Great 100 Nurses* are chosen by their peers for epitomising efficiency, quality and compassion in their daily work, which ultimately contributes to patients' hospital or facility experience.
- The *Life Healthcare Journal of Health Sciences* underlines the evolving role of the nursing profession and the positive impact that a diverse range of nursing and quality initiatives implemented within Life Healthcare is having on patient outcomes.
- We are always looking for best practice quality improvement ideas. Being at the bedside, nurses can often contribute their insights. Then, when ideas are implemented, contributing nurses are recognised.
- For our nursing students, we host formal graduations and academic awards ceremonies.

In 2020, we completed a pilot programme of the Perfect Ward real-time digital data capturing system. The aim was to reduce nurses' administrative burden. The system captures inspection results, with comments and photographic evidence, and delivers live analytical insights to improve clinical outcomes and patient experience. The pilot resulted in an average reduction in non-clinical time of between seven and 15 minutes.

The pilot was part of the new Life Healthcare nursing excellence strategy, which will support quality outcomes. The nursing excellence strategy comprises six pillars:

1. Workforce planning
2. A human resources framework
3. Specialised nursing development
4. Theatre modernisation and automation
5. Digitisation to reduce the administrative burden
6. Visual data representation for ease of analysis

Refer to the "The future of quality at Life Healthcare" chapter on page 93 for detail on this five-year strategy.

Nursing Education

The Life College of Learning is a higher education institution – one of the top three private nursing education institutions in South Africa. This initiative contributes to the national pool of essential nursing skills and is an important tool in retaining and developing nurses for Life Healthcare in South Africa. The College's nurse training programmes have proven to be strategically important to the success and reputation of the Group. Life College of Learning consists of seven learning centres:

- Cape Town
- East London,
- East Rand (Springs)
- KwaZulu-Natal (Durban)
- Port Elizabeth
- Pretoria
- West Rand (Roodepoort)

Over the past 10 years, we have enhanced the college learning centres with technological advancements, including computer and simulation laboratories and real-life models. These investments are proving invaluable during COVID-19 restrictions.

2010	2011	201	2013	2014	2015	2016	2017	2018	2019	**2020**
1 053	1086	1 250	777	888	1 256	988	1 408	1 075	1 005	**802**

The past few years saw the phasing out of legacy nursing training programmes, to allow for the implementation of Higher Education Qualifications Sub-Framework-aligned qualifications. The South African Nursing Council (SANC) has accredited four of Life Healthcare's seven learning centres for the new qualifications, and we are confident we will receive accreditation for two other learning centres in 2021.

"I HAVE HAD THE PRIVILEGE OF WATCHING THE LIFE COLLEGE OF LEARNING GROW OVER THE LAST TEN YEARS. THEIR COMMITMENT TO DOING THINGS RIGHT AND DOING THE RIGHT THING HAS BEEN EVIDENT FROM THE BEGINNING. THE COLLEGE WERE PIONEERS IN SETTING UP A DECENTRALISED SYSTEM OF EDUCATION AND CREATED SYSTEMS THAT MET ALL THE REQUIREMENTS AND MORE FOR A QUALITY INSTITUTION OF LEARNING. WHAT HAS BEEN EVEN MORE REMARKABLE HAS BEEN THE COMMITMENT TO ONE ANOTHER AND TO THEIR STUDENTS WHICH CAME SHARPLY INTO FOCUS DURING THE COVID-19 EPIDEMIC."

– DR SUSAN JENNIFER ARMSTRONG, SENIOR LECTURER (NURSING EDUCATION), WITS

MAKING LIFE BETTER FOR OUR PEOPLE continued

The following legacy programmes were phased out:

- Certificate leading to enrolment as a nursing auxiliary – 2015
- Certificate leading to enrolment as a nurse – 2017
- Bridging programme leading to registration as a nurse – 2019
- Diploma in Midwifery – 2019
- Diploma in Medical and Surgical Nursing Science – 2019
  - Critical Care Nursing
  - Operating Theatre Nursing
  - Emergency Nursing
- Diploma as an Operating Department Assistance: Three-year diploma in health sciences. This programme was offered at a single learning centre in Pretoria, leading to consistently low numbers. A further challenge is that there is no regulatory body where students can register after qualifying. Therefore, the programme will no longer be offered from 2021.
- Short Learning Programme. There are 11 short learning programmes facilitated through the Life College of Learning. Aside from 2020, when certain programmes were put on hold due to COVID-19, the numbers are consistently high.

Number of students who graduated from 2010 to 2020

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	**Final year 2020**
Auxiliary Nurse	202	174	115	132	67	24	19	10			
Enrolled Nurse	345	252	359	298	433	276	129	229	3		
Bridging	117	159	235	238	316	300	240	231	307	447	**515**
Midwifery							11	20	14	25	**25**
Specialist Nurses	33	41	23	109	72	49	64	49	39	65	**161**
Operating Department Assistance							14	10	11	18	**9**
Short Learning Programmes	66	64	118	82	31	34	60	71	80	55	**39**
TOTAL	773	695	854	777	888	683	537	620	454	610	**749**

Total number of student nurses registered in training

The decrease in student numbers in 2016 was due to the cessation of the certificate leading to enrolment as a nurse. From 2017 there was a drive to train bridging and post-basic students, as these programmes were phased out at the end of 2019.

2010	2011	201	2013	2014	2015	2016	2017	2018	2019	**2020**
1 119	1 150	1 368	1 262	1 078	1 236	967	1 1 56	1 017	880	**802**

Basic nursing programmes

The sharp reduction in student numbers is due to the cessation of legacy programmes.

2010	2011	201	2013	2014	2015	2016	2017	2018	2019	**2020**
1 001	998	1 154	1 071	923	1 099	840	864	836	724	**641**

"THE WORDS THAT IMMEDIATELY COME TO MIND WHEN REFLECTING ON MORE THAN 15 YEARS OF INVOLVEMENT WITH THE LIFE COLLEGE OF LEARNING, ARE INNOVATION, PROGRESSION, PERFORMANCE AND COLLABORATION. EVEN MORE IMPRESSIVE IS THE QUALITY OF THE GRADUATES, WHO ARE WELL-ROUNDED IN TERMS OF KNOWLEDGE, COMPETENCIES AND SKILLS. THESE HEALTHCARE PROFESSIONALS MAKE A REAL AND CRITICAL IMPACT ON THE HEALTH OF SOUTH AFRICANS AND I SALUTE THE COLLEGE FOR THAT!"

– PROF DALENA VAN ROOYEN, EXECUTIVE DEAN (ACTING), FACULTY OF HEALTH SCIENCES, NMU

Post-basic diplomas

Due to the phasing out of the post-basic legacy programmes at the end of 2019, there was a drive to boost the final intake of students in November 2019, leading to a higher number of students in 2020.

2010	2011	201	2013	2014	2015	2016	2017	2018	2019	**2020**
52	88	96	109	124	103	67	221	101	101	**161**

New qualifications

Undergraduate programmes

In 2014, The South African Council on Higher Education (CHE) accredited two programmes of the Life College of Learning. In 2019, SANC accredited learning centres to commence with these new programmes in 2021:

- **Diploma in general nursing** at East Rand and Port Elizabeth learning centres, with a first intake of 42 students. The facilities are accredited for 30 students per programme, one intake per year.
- **Higher certificate: auxiliary nurse** at Port Elizabeth learning centre, with a first intake of 11 students. The facility is accredited for 30 students, one intake per year.

Postgraduate diplomas

Due to the phase out of the legacy post basic qualifications, curriculums for the following programmes were submitted to SANC for accreditation:

- Critical care nursing (Adult)
- Peri-operative nursing
- Emergency nursing
- Health service management
- Advanced diploma in midwifery

Student funding

Nursing education enhances Life Healthcare's succession pipeline. Therefore, the Group supports students with direct funding and by assisting them to obtain external funding. The categories of student funding are:

- Health and Welfare Sector Education and Training Authority (HWSETA) learnerships
- Candidates studying at a university can apply for the Life Healthcare Nursing Trust bursary, which includes tuition, books and accommodation, and has no work-back clause
- Individual hospitals and facilities also sponsor student bursaries, which generally do include a work-back clause
- Self-funded students receive a monthly stipend for the duration of their studies

Achievements from 2010 to 2020

Accreditation

- 2012 – Life College of Learning became the first private healthcare education provider in South Africa to be registered as a Private Higher Education Institution
- 2012 – Our diploma in operating department assistance was accredited by the South African CHE
- 2014 – The Diploma in midwifery was accredited by SANC
- 2015 – Life College of Learning obtained ISO9001 accreditation
- 2016 – CHE accreditation received for the higher certificate: auxiliary nurse and the diploma in nursing
- 2018 – 20 years of education excellence and 11 000 students
- 2019 – SANC accreditation for new qualifications at East London, East Rand and Port Elizabeth learning centres
- 2020 – SANC accreditation for new qualifications at West Rand learning centre
- Life College of Learning has been affiliated with Nelson Mandela University for more than 20 years

Research

- 2012 – We introduced regional, annual research days aligned with annual graduation ceremonies
- 2015 – Regional research committees were established
- 2018 – Life College of Learning was accredited by the National Health Research Ethics Committee – a first for a private higher education institution

Simulation and computer laboratories

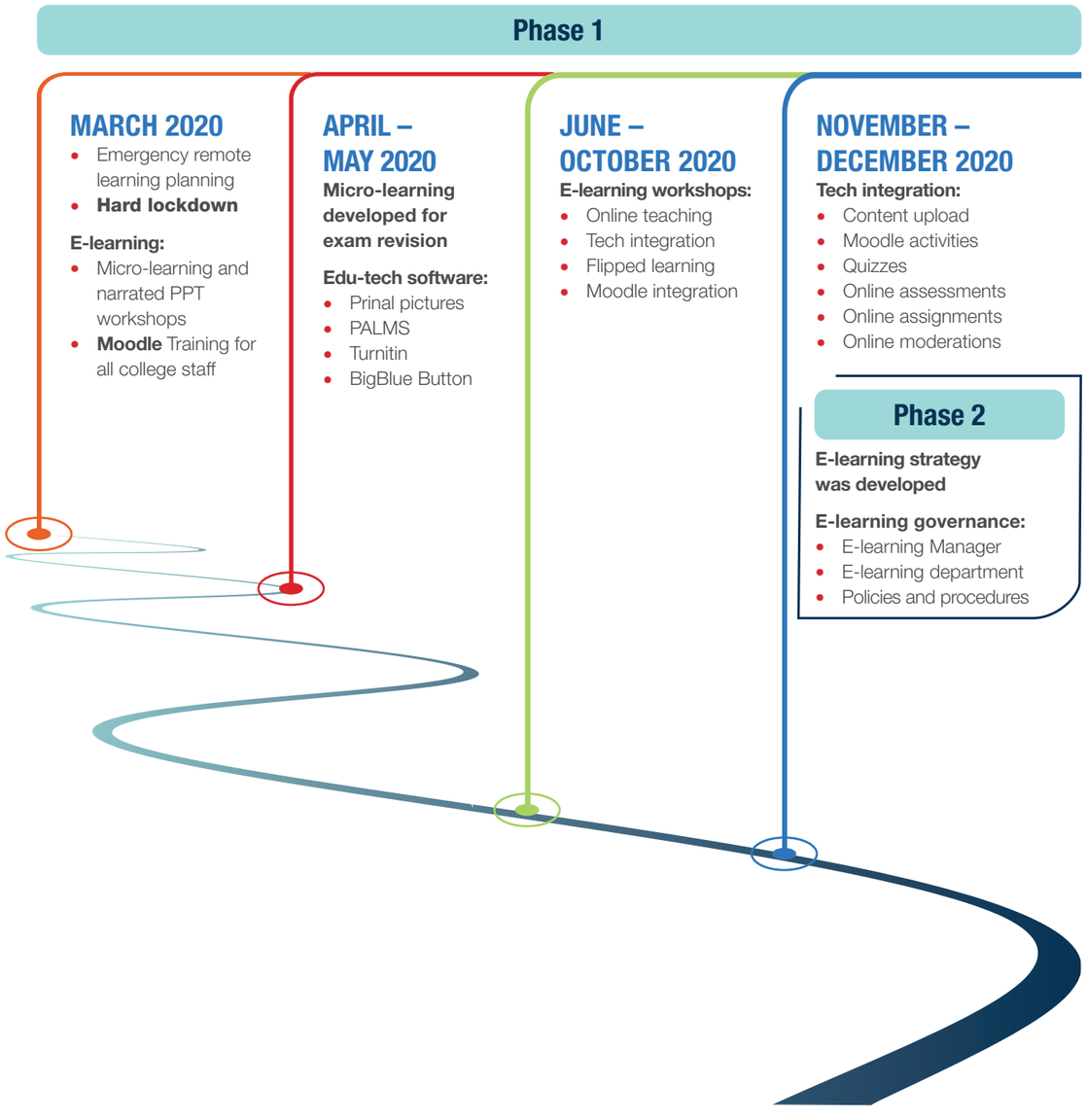
- 2015 – Simulation laboratories with SimMan and SimAnne advanced patient simulators that can display neurological symptoms as well as physiological. Laboratories consist of high, medium and low fidelity simulation.

MAKING LIFE BETTER FOR OUR PEOPLE continued

E-learning

The COVID-19 pandemic and the imposed local lockdown regulations established a new teaching approach in the higher education landscape, with technology at the centre as face-to-face lectures became almost impossible.

The College was required to change its teaching approach from class-room-based to blended-learning, which is a combination of face-to-face instruction and computer-mediated instruction. Nurse educators were challenged to teach in new ways and expand their knowledge of pedagogy. Below is a road map that illustrates the e-learning journey Life College of Learning embarked on in 2020.



Master's and doctoral Degrees obtained between 2010 and 2020

Master's Degree			
Name	**Year**	**Name**	**Year**
College			
Cecile Breytenbach	2015	Shereen Choonara	2017
Nafiza Cassim	2015	Briony Berning	2018
Yvonne Beepat	2015	Juanita Espach	2018
Lilian de Lange	2016	Roelien Els	2018
Lorraine Govender	2016	Yashmin Samlal	2018
Rita Ragavadu	2016	Jo-Anna Richardson	2019
Izelle Loots	2017	Naomie Hattingh	2019
Magda Cunze	2017	Thulisiwe Mabaso	2020
Practice			
Natashja Engelbrecht	2010	Franny Louw	2015
Mehboob Yusuf	2011	Annelie du Toit	2016
Janneke Steyn	2012	Anita Human	2016
Marisa Roets	2013	Grace Maleka	2016
Florence Ogwal	2013	Darren van Zyl	2017
Galiema Motara	2013	Ursulla Smith	2017
Ina Van Wyk	2013	Maruanda Liebenberg	2018
Filomena Borrageiro	2014	Beauty Mogothlane	2018
Thriscilla Pillay	2014	Margaret van Rooyen	2018
Myra Viljoen	2014	Yolanda de Klerk	2019
Margie Havenga	2014	Tanya Zaaiman	2020
Mpho Tshabalala	2014	Sona Nuby	2020
Gertrude Phiri	2015	Clare Wepener	2020
Yvette Phyfer	2015		

Doctoral Degree			
Name	**Year**	**Name**	**Year**
College			
Dr Mariana Scheepers	2020		
Practice			
Dr Vasti van Niekerk	2014	Dr Jeananne Dunsdon	2018
Dr Agnes De Langen	2016	Dr Alet Rheeder	2020
Dr Marisa Roets	2018		

MAKING LIFE BETTER FOR OUR PEOPLE continued

Articles published by College employees

Name	Title	Year	Journal
Dr Sharon Vasuthevan	Private Sector contribution to Nursing Education 1990 – 2010	2014	FUNDISA Series
Roodt A, Lubbe I.	Fueling a research culture at Life Healthcare	2015	Nursing Innovations in South Africa
Dr Sharon Vasuthevan	Integrating evidence-based practice in a nursing curriculum based on the RNAO Guidelines using action research	2015	RNAO Journal
Anne Roodt	Getting to grips with Evidence Based Practice	2016	Health Advance Institute 15th Conference
Magda Cunze	Reshaping Clinical Education	2016	Life Healthcare. Journal of Health Sciences
Izelle Loots	Compassion the essence of nursing	2016	Life Healthcare. Journal of Health Sciences
Magda Cunze	Student Charter: Translation of a vision into reality	2017	Life Healthcare. Journal of Health Sciences
Cecile Breytenbach	An Integrative Literature Review of Evidence-Based Teaching Strategies for Nurse Educators	2017	Nursing Perspective
Yvonne Beepat	The influence of Peer Mentoring on Critical Care nursing students" learning outcomes	2018	International Journal of Workplace Health Management
Magda Cunze	20 Years of Nursing Education Excellence	2019	Life Healthcare. Journal of Health Sciences
Izelle Loots	Establishing the Life College of Learning Alumni society	2019	Life Healthcare. Journal of Health Sciences
Dr Mariana Scheepers	South African neonatal nurse specialisation – is professional licensing justifiable?	2020	Journal of Neonatal Nursing
Dr Mariana Scheepers	Competencies of structured professional development of neonatal nurses in South Africa	2020	African Journal of Health Professions Education
Dr Mariana Scheepers and Andile Mafilika	A new era with a new curriculum	2020	Life Healthcare. Journal of Health Sciences

"LIFE HEALTHCARE PLACES HIGH VALUE ON EVIDENCE-BASED PRACTICE AND SOUND RESEARCH. MY RESEARCH-RELATED INVOLVEMENT WITH LIFE HEALTHCARE IS AN ENRICHING EXPERIENCE OF MUTUAL VALUE."

– PROF GISELA VAN RENSBURG, DEPARTMENT OF HEALTH SCIENCES, UNISA

Presentation of College employees at industry conferences

Name	Title	Year	Conference
Cecile Breytenbach	Integration of theory into practice	2011	Annual Nursing Education Association Conference
Izelle Loots, Dr Sharon Vasuthevan, Prof Gisela van Rensburg	Assessment of Clinical Teaching related to prevention of surgical site infections	2011	Annual Nursing Education Association Conference
Roelien Els	A reflection on the experiences of a novice researcher during a pilot research project	2011	Annual Nursing Education Association Conference
Roelien Els	Focused clinical facilitation to enhance the enrolled nurse's competencies within the framework of her scope of practice	2011	Annual Nursing Education Association Conference
Magda Cunze	Clinical Education Model: Adapted for Life Healthcare	2012	Annual Nursing Education Association Conference
Stephanie Swartbooi	Views of the nurse educators and clinical training specialists as research mentors in a Private Nursing College (Poster presentation)	2012	Annual Nursing Education Association Conference
Yvonne Beepat	International Journal of Workplace Health Management	2013	Annual Nursing Education Association Conference
Anne Roodt	Development of an EBP implementation model	2013	Annual Nursing Education Association Conference
Anne Roodt	Strengthening research culture and capacity in Nursing Education Institutions	2013	Annual Nursing Education Association Conference
Anne Roodt	Poster presentation: Evidence Based Practice	2013	13th Annual Conference of Sigma Theta Tau International African Honor Society
Nafiza Cassim	Exploring the perceptions of registered nurses regarding mandatory continuing professional development in a selected private hospital in the KwaZulu-Natal Region	2014	Annual Nursing Education Association Conference
Anne Roodt	Evidence Based Practice: Reduction of adult patient falls	2014	Hospital Association of South Africa (HASA)
Roelien Els	Reflections of experiences on peer support	2015	South African International Caritas Consortium
Izelle Loots, Dr Sharon Vasuthevan, Prof Gisela van Rensburg	Exploring the caring attitude and practices of Indian nurses recruited by a private hospital group	2015	South African International Caritas Consortium
Juanita Espach	Xhosa speaking nursing students' experiences of education in a language that is not their mother tongue	2016	Annual Nursing Education Association Conference
Dr Mariana Scheepers	Competencies in Neonatal Care	2016	NNASA 7th National Conference (Neonatal Nurses Association of Southern Africa) Pietermaritzburg, KZN, South Africa

MAKING LIFE BETTER FOR OUR PEOPLE continued

Name	Title	Year	Conference
Dr Mariana Scheepers	Development of a competency framework for the Professional Development of different categories of nurses in Neonatal Practice	2016	9th International Neonatal Nursing Conference, Vancouver, Canada
Magda Cunze	Student Nurses Perception of Professional Nurses as Role Models in the Clinical Learning Environment	2016	Sigma Theta Tau International Nursing Research Conference Cape Town
Cecile Breytenbach	Systematic review of evidence based teaching strategies	2017	Sigma Theta Tau International, Cape Town
Magda Cunze	Student Nurses Perception of Professional Nurses as Role Models in the Clinical Learning Environment	2017	Annual Nursing Education Association Conference Johannesburg
Roelien Els	Perceptions of nurses of their roles and responsibilities in realisation of the "back to basics nursing care" quality improvement initiative	2017	Sigma Theta Tau International, Cape Town
Roelien Els	Student support in research capacity development. Reflections on experiences in an ODL context	2017	Sigma Theta Tau International, Cape Town
Izelle Loots	Mentoring needs of novice clinical facilitators	2017	Sigma Theta Tau International Research Conference, Cape Town
Adele Neethling	Poster presentation: Closing the Theory-Practice Gap: A Peer Mentoring Program to meet the expectations	2017	Sigma Theta Tau international research conference
Magda Cunze	Student Nurses Perception of Professional Nurses as Role Models in the Clinical Learning Environment	2018	Sigma Theta Tau International Nursing Research Conference Dublin, Ireland
Juanita Espach	The experiences of nursing students using digital storytelling as a teaching and learning strategy	2018	NMU Health and Sciences Annual Research Conference
Izelle Loots	Why should the journey of every clinical facilitator start with mentoring	2018	Annual Nursing Education Association Conference
Dr M Scheepers	Vermont Oxford Network and the implication for nursing care	2018	NNASA 8th National Conference (Neonatal Nurses Association of Southern Africa) Dube Trade Pt KZN, South Africa
Briony Berning	Early recognition of the deteriorating patent	2019	Critical Care Conference
Jo-Anna Richardson	Poster presentation: Factors influencing the retention of midwives in the public sector maternity services in Johannesburg	2019	Annual Nursing Education Association Conference Johannesburg
Dr Sharon Vasuthevan	Dr Vasuthevan has presented more than 32 papers at different conferences, both nationally and internationally		
	Opportunities for Interprofessional Education in Neonatal Healthcare: an integrative review	2019	2nd Interprofessional Education & Collaborative Practice for Africa Conference, Kenia
	Co-author of poster "Early warning signs of cancer in children aged 0 – 5 years: Creating awareness amongst primary Healthcare workers"		

Leadership positions in professional organisations, structures or associations

Name	Position	Professional Organisation/Association
Cecile Breytenbach	Vice-Chair	NEA East London Chapter
Nafiza Cassim	Treasurer	NEA KZN Chapter
	Secretary	
	Co- Chairperson	
Magda Cunze	Chairperson	NEA Pretoria Chapter
	Chairperson	Life College of Learning: Senate
Izelle Loots	Board member, Vice- Chairperson, Chairperson	Nursing Education Association
	Leader and Co-founder	Nursing improvement platform
	Member- Advisory board	Solidarity
Dr Mariana Scheepers	Board member 2011-current and Gauteng Branch treasurer 2019	NNASA (Neonatal Nurses Association of Southern Africa)
Mariana Scheepers	2018-2019 Chair of the Research and Scientific Committee Life Healthcare	Research and Scientific Committee Life Healthcare
	2019- current Member of the Research and Scientific Committee Life Healthcare	Research and Scientific Committee Life Healthcare
Dr Sharon Vasuthevan	Held multiple leadership positions	Nursing Education Association
		South African Nursing Council
		Hospital Association of South Africa
		Life Healthcare College Senate and Council

Graduations

Graduation ceremonies are an annual event on Life College of Learning's calendar and a highlight of the academic year when students and their families celebrate the start of their new journey into the nursing profession. Seven graduation ceremonies held nationally, and attended by members of the Group executive committee, college management, local universities and regional hospitals.

Alumni

In 2019, an alumni group was established, as part of the 20-year commemorative celebrations of Life College of Learning. The main objective of the group is to keep in touch with our graduates, celebrate their achievements and career progression and to support networking between members of the alumni. Membership is automatic for all graduates. We take pride in the fact that various alumni of the College have excelled in their careers and hold in managerial positions in different Life Healthcare hospitals nationally.

Continuous Professional Development (CPD)

One of the ethical obligations for health professionals is an ongoing commitment to competence. Becoming competent and maintaining competence requires ongoing learning. It may include new knowledge or understanding new ways of doing things. The credibility of a profession is founded on the willingness of each professional to embrace new skills, knowledge and experience. Lifelong learning is a hallmark of committed and competent health professionals. Ongoing learning, both formal and informal, is required to maintain clinical competence.

MAKING LIFE BETTER FOR OUR PEOPLE continued

SANC, in line with the provisions of the Nursing Act, 2005 (Act no. 33 of 2005), is in the process of developing a CPD system. This is a response to the need expressed by the profession to ensure nurse practitioners remain up-to-date with the required competencies of their specific areas of practice. It is also seen as a mechanism that will provide opportunities to practitioners to pursue and achieve professional growth throughout their careers to benefit the people of South Africa.

In terms of the Nursing Act, conditions related to CPD will become a prerequisite for renewal of nurses' annual license to practice. Each nurse must complete 15 CPD points annually. In preparation for the publication of regulations, and to promote nursing competency, Life Healthcare commenced the CPD programme in 2011. All nurses working for the Group must complete the Life Healthcare CPD programme for nurses.

Nurses must earn CPD points for the themes reflected in the table below, which sets out the points proposed by SANC. We require each nurse to earn 20 points.

	Themes For Delivery				
Nursing Category	Ethical and Legal (EL)	Area of Practice (AOP)	Leadership/ Management (LM)	Teaching/ Research (TR)	Total CPD Points
Registered/ Professional Nurse	4	6	3	2	15
Midwife	4	6	3	2	15
Staff Nurse	4	6	3	2	15
Enrolled Nurse	3	9	1	2	15
Auxiliary Nurse	3	10	1	1	15

PHARMACY

Pharmacists' role in quality at Life Healthcare

Pharmacists make both a clinical and a commercial quality contribution to Life Healthcare, playing a key role in the delivery of cost-effective quality care through efficient procurement and supply processes and management of our significant inventory asset, as well as optimising pharmaceutical product utilisation. Life Healthcare's pharmacists play a supporting role in guiding and evaluating pharmocotherapy, making interventions when appropriate to improve quality care and patient outcomes.

Unsafe medication practices and medication-related adverse events are a leading cause of injury and avoidable harm in healthcare systems across the world. These incidents can result in severe harm, disability and even death, as well as significant increase in cost. Pharmacists have a central role in ensuring medication safety across the continuum of care.

Life Healthcare employs clinical pharmacists and clinical practice pharmacists at most acute hospitals in southern Africa. They provide pharmaceutical care at ward level, actively participate in multi-disciplinary ward rounds and are becoming essential members of the multi-disciplinary healthcare team.

Their presence has ensured improved communication with nurses and doctors due to their availability at the bedside when required, to provide guidance on pharmacotherapy challenges. The clinical pharmacy team stays abreast of the latest evidence-based literature, and frequently makes recommendations to doctors to align patient treatment to peer-reviewed best practice treatment protocols, supporting improved patient outcomes and often preventing unnecessary treatment costs.

The role of pharmacy practice

- Alignment to ISO 9001:2015, National Department of Health National Core Standards and South African Pharmacy Council regulatory requirements
- Proactive identification and management of risk through evidence-based analysis and trend identification
- Facilitating risk-mitigating solutions
- Developing risk-specific protocols for high-alert medications
- Implementing the QMS in pharmacy and contributing to Group quality outcome measures
- Communicating and facilitating learnings to encourage continuous improvement across the Group

Pharmacists are the key drivers of AMS – monitoring and reporting antimicrobial use and intervening to ensure effective stewardship. This has proven to reduce inappropriate antimicrobial utilisation at Life Healthcare facilities, which is in line with the National Department of Health and WHO antimicrobial resistance strategies.

Developing pharmaceutical skills for quality outcomes

Since clinical pharmacy skills are scarce in southern Africa, we track pharmacist turnover closely to enable us to identify areas of concern. We have seen a marked decrease in the annual turnover rate of pharmacists from 27.7% in 2010 to 8.0% in 2020. This was due to a phased, targeted intervention for pharmacist retention, including training and development and a concurrent review of remuneration to align to industry norms.

We ensure pharmacists remain engaged by providing them with the necessary tools and information required to perform their job optimally and opportunities to improve their competency. Wherever possible, we re-engineer operational processes and enhance system functionality to support professional and technical best practice.

Our development focus is on programmes that feed into our internal succession pool as well as establishing an industry presence to build a talent pipeline. In 2014 and 2015, Life Healthcare partnered with Nelson Mandela University to run a clinical practice pharmacist certificate course. This upskilled 39 of our pharmacists with a post graduate certification over the two years. As pharmacists with a clinical pharmacy master's qualification were extremely scarce at the time, this certificate course enabled us to initiate our clinical pharmacy programme in Life Healthcare with our own pharmacists who were passionate about clinical work.

We also develop pharmacy skills through online continuing professional education modules and through our pharmacists' internship and pharmacists' assistant programmes:

- Continuing professional education modules are available to all pharmacy employees, and the content and approach have evolved over the years to ensure they are aligned with the Group's strategy, including the quality pillar. This has also facilitated the mandatory completion of continuing professional education for pharmacists now required by the South African Pharmacy Council.
- The Life Healthcare pharmacists' internship programme has trained 265 pharmacist interns in the last 10 years. The number of applications has more than doubled during the period, and the programme has been significantly oversubscribed in recent years.
- Pharmacy support employees play an important role in allowing pharmacists to be more involved in clinical work and patient care, engaging more closely with doctors and other healthcare professionals. For this reason, we have purposely increased the intake of pharmacists' assistants in training over the years. In keeping with the Group and the country's transformation priorities, we prioritise African, coloured and Indian candidates.

Since 2012, 148 qualified post-basic pharmacist assistants have completed workplace-based learning in our pharmacies. We have partnered with the South African HWSETA for funding to expand this training.

Number of pharmacists' assistants in training

	2015	2016	2017	2018	2019	**2020**
Basic level	19	20	11	22	19	**22**
Post-basic level	18	12	23	13	22	**18**
Total	37	32	34	35	41	**40**

Industry participation

Our pharmacists are encouraged to serve on industry bodies, and participate in workshops and conferences.

Life Healthcare is represented on the South African Society of Clinical Pharmacy's executive committee, the South African Antibiotic Stewardship Committee and the National Department of Health Ministerial Advisory Committee on Antimicrobial Resistance.

The national pharmacy practice manager participates in the head of pharmaceutical services meetings held bi-annually by the Pharmacy Council, where key legal and professional issues impacting the profession are discussed and communicated

We also regularly submit commentary on proposed legislative and regulatory changes impacting pharmacy.

Since 2015 our clinical pharmacy community has presented continuous improvement projects at the annual South African Society of Clinical Pharmacy Conference. Over time they have scooped multiple awards in all categories

Our pharmacists have presented at South African Pharmacy Council conferences since industry participation was initiated in 2016, and also at Pharmaceutical Society of South Africa conferences.

PARTNERING FOR QUALITY CARE

2009

Establishment of the Life Healthcare clinical directorate

- In 2017, the clinical directorate was expanded to include **five clinical managers** resulting in improved cross functional engagement and strategic alignment

- **Medical advisory committees** at each hospital assist our doctors to achieve quality excellence

- **Clinical review panels** consisting of doctors and specialists from a range of disciplines develop and share data regarding clinical outcomes and the cost of healthcare

JOINING FORCES WITH COMMITTED DOCTORS

The clinical directorate's role in quality at Life Healthcare

The Life Healthcare clinical directorate was established in 2009 to achieve the best clinical outcomes and experience for patients, through involving doctors in Group leadership positions.

Since its establishment, the clinical directorate has evolved from a small team of specialists dealing mainly with operational matters, to a structured department comprising a team of doctors with experience from both the private and public healthcare sectors and varying specialities, from paediatrics to public health medicine. The team is also one of the most diverse in terms of racial and gender representation and each member contributes to the clinical goals of the business with their unique skill set.

The clinical directorate has helped to develop rapport between Life Healthcare and the doctors based at our hospitals and facilities. Previously, doctors viewed their association with the Group as transactional, comprising admission privileges and rental terms. Since establishing the directorate, the relationship has evolved into a partnership concerned with the quality of healthcare.

The directorate also collaborates with other key employees, including management, nursing, and health and social care professionals.

The clinical directorate engages with these health care professionals at various platforms, including:

- Hospital-based Medical advisory committees (MAC), with inclusion of doctors The focus is largely on improving quality by addressing operational concerns within a clinical governance framework.
- Head-office co-ordination of Clinical Review Panels consisting of specialists from a range of disciplines, to develop and share data regarding clinical products, clinical outcomes monitoring and the cost of healthcare.

The composition of these committees and panels is deliberately reflective of the diversity of our country, and includes representatives from different areas, races, genders, ages and cultures. The team, along with other clinical departments, have also assembled eight clinical panels which are responsible for the research and development of clinical products.

We provide oversight to ensure all partner doctors comply with regulatory requirements. We assist facility management in driving compliance by doctors to the requirement of annual registration with the Health Professions Council of South Africa (HPCSA), and support them in this process as necessary.

All doctors with admission privileges at our facilities must have suitable malpractice insurance policies in place. The Doctor Stakeholder Manager continues to monitor this through our online portal, which was launched in 2019. More than 80% of our doctors are registered on this portal, which has substantially improved control in managing doctors' insurance renewals.

The clinical directorate is responsible for the development and publishing of an annual doctor quality and efficiency report that contains detailed doctor and hospital quality and efficiency measures as related to the previous calendar year.

This report is the product of a collaborative effort between multiple departments including quality, pharmacy, marketing, business analytics and clinical directorate. The report is regarded as confidential and provides individual doctors with an in-depth view of their in-hospital patients' general demographics, funder analysis, clinical efficiency measures and quality indicators. It furthermore also provides an in-depth view of their individual hospital's performance considering various efficiency and quality metrics.

The data allows doctors to benchmark themselves against their peers whilst taking into consideration their specific mix of patients by using diagnostic related groupings (DRG). This DRG benchmarking enables a comparison of each doctor's clinical efficiency measures to their peers' admissions with similar diagnoses, procedures and nursing requirements.

The report was initially produced in 2017 and has been well received by our specialist partners. Based on ongoing feedback from specialists and the evaluation of business requirements, the report has continued to evolve to provide a more robust and tailored view of specific clinical efficiency measures, such as radiology and pathology data, more specific quality indicators and most recently a detailed view of quality and efficiency measures associated with COVID-19 admissions.

The doctor quality and efficiency report is distributed to specialists in a high quality printed format every year and is followed by a detailed discussion with the regional clinical manager and/or hospital manager over a 90-day engagement cycle on the specialist's specific quality and efficiency measures, benchmarks and comparisons. This allows for greater alignment and collaboration to drive quality clinical outcomes and efficiency and to create sustainable clinically lead healthcare delivery to our patients.

These engagements are facilitated through the five clinical managers across the five business regions. In addition, the clinical managers function in the following key areas:

- Relationship management with clinicians and societies
- Implementation of the clinical governance framework, including clinical risk management.
- The regional implementation of Clinical Products
- Clinical efficiency alignment
- Funder relations support
- Medico-legal support
- Life Healthcare research committee support

The expansion of this department has resulted in improved cross functional engagement and strategic alignment.

Recruiting skilled doctors for quality outcomes

Life Healthcare's reputation for positive relationships with doctors helps us build a portfolio of excellent specialists. By doing this, we can offer accessible and inclusive healthcare for the communities surrounding our facilities.

Life Healthcare's value proposition to doctors

- Our quality of healthcare is superior
- The Group has a high level of expert nursing skills
- We offer outsourced practice support to assist doctors to set up their practices
- We conduct a thorough onboarding process

We proactively recruit doctors to meet the need for scarce skills. This is a structured process, which starts with a gap analysis of which skills are most needed at which facilities.

Regular surveys are undertaken to determine the need for specific specialists at facilities. Depending on the urgency of the need, specialists are recruited from those approaching us via our specialist career web portal, our database of young recently qualified specialists established from our interaction with medical schools by sponsorship of educational and social activities and our own annual private practice event for doctors qualifying as specialists.

We are also contracted with four medical specialist recruitment agencies to recruit specialists where we do not have candidates available. For very scarce disciplines where we have difficulties to recruit in the open market, we enter into agreements with clinical departments at suitable medical schools to train specific specialists for specific hospitals.

The key critical skills Life Healthcare requires remain in orthopaedics, obstetrics, internal medicine, paediatrics and general surgery. However, we are seeing a rise in lifestyle diseases like diabetes, hypolipidemia and hypertension, and a growing incidence of obesity, which require critical skills attention. We are also seeing more mental health issues, especially mood disorders.

We take a holistic view of our facilities, deliberately placing doctors where they are most needed. We approach experienced specialists and newly qualified doctors to fill the necessary positions. This includes recruiting doctors at a post-graduate level at medical schools, who are offered bursaries with work-back clauses.

We also engage with medical associations and tertiary institutions to train specific specialists in scarce disciplines based on our facilities' needs to ensure we cultivate a pipeline of specialists.

We advocate for a situation where hospitals are allowed to recruit doctors as employees. A regulatory clause from the HPCSA prevents doctors from accepting a job at a hospital. We can apply for special dispensation to employ doctors on a case-by-case basis. For example, some of our ICUs, emergency rooms and labour units have doctors as employees.

06

THE IMPACT OF COVID-19

- Life Healthcare established a **response framework** and adopted an integrated approach to combating the pandemic
- Our multi-disciplinary **COVID-19 task** team provides clinical and operational guidance

We developed:

- **A COVID-19 incident reporting system**
- **A patient tracker**
- **An employee tracker**

  to accurately record the number of patients and employees infected with the virus and their recovery
- Pharmacy developed a **COVID-19 pharmacotherapy considerations guide** aligned to peer-reviewed best practice treatment protocols
- We established a **specialised COVID-19 rehabilitation programme** to improve patients' quality of life during the COVID-19 recovery process

THE IMPACT OF COVID-19

First and foremost, we prioritised the safety and health of our nurses, clinicians, employees and patients.

Our response was informed by local and international guidelines and procedures. We established a response framework and adopted an integrated approach to combating the pandemic. We implemented several initiatives, including:

- Establishing a multi-disciplinary COVID-19 task team at a national and facility level to provide clinical and operational guidance
- Developing a COVID-19 incident reporting system
- Standardising clinical management protocols based on the best evidence available locally and internationally
- Reconfiguring our infection prevention and control measures
- Introducing ethical guidelines detailing procedures on how to allocate scarce resources
- Monitoring and evaluating COVID-19 admissions, including daily caseloads, respiratory support modalities and pharmacotherapy compliance
- Establishing a specialised COVID-19 rehabilitation programme

We aimed to balance our efforts between treating COVID-19 patients and judicious management of necessary surgery. At any given point, our facilities were managing a demanding caseload driven by COVID-19 admissions, accommodating essential surgeries and ensuring the availability of critical care equipment, medicines, and surgical consumables.

We developed a COVID-19 patient tracker to keep accurate records of the number of patients diagnosed with COVID-19 admitted to our facilities, as well as the level of care and clinical support they needed. Life EHS developed a COVID-19 employee tracker to record the number of our employees infected with the virus and their recovery, which also supported management in prioritising interventions.

Our pharmacists were at the forefront of the pandemic, and we had to ensure continuity of supply in an environment where effective procurement required perseverance, flexibility and creativity. Nursing shortages due to illness meant pharmacists were sometimes called on to assist with the reconstitution of medicine in COVID-19 wards.

Treatment recommendations evolved as the pandemic progressed from the first to the second wave. Pharmacy developed a COVID-19 pharmacotherapy considerations guide based on the latest evidence-based literature to support our doctors in aligning patient treatment to peer-reviewed best practice drug treatment protocols. To keep up to date, pharmacy also instituted COVID-19 pharmacotherapy treatment audits. These enable clinical pharmacists at hospital level and our multi-functional clinical team at the Life Healthcare head office to measure the alignment of prescribed pharmacotherapy with the latest recommendations. The audits identified areas for improvement, which were addressed through continuous engagement with COVID-19 clinical committees at hospital level and through clinical directorate communiqués to our doctors.

Our specialised COVID-19 rehabilitation programme improves patients' quality of life during the COVID-19 recovery process. By managing the transition of care from the hospital environment to the rehabilitation setting a safe discharge home is facilitated.

Coordinated and supported discharge planning aims to reduce ICU and hospital re-admissions and facilitates early identification and management of health impairments to reduce the risk of long-term complications. Ongoing support and counselling is available to patients and family members in dealing with traumatic events throughout the recovery process.

Life Healthcare participated in the Sisonke vaccine trial to ensure South African healthcare workers are protected against future surges of COVID-19. The research component of the trial required the participation of good clinical practice (GCP) pharmacists. We trained 46 of our pharmacists who, together with the existing 14 who already had GCP certification, assisted at vaccination sites – both public and private – countrywide.

Learnings

COVID-19 provides Life Healthcare with a learning opportunity unprecedented in our lifetime. We are documenting our learnings in a handbook which will better prepare us for future pandemics which might emerge and improve the speed of operational decision-making.

Negative impacts

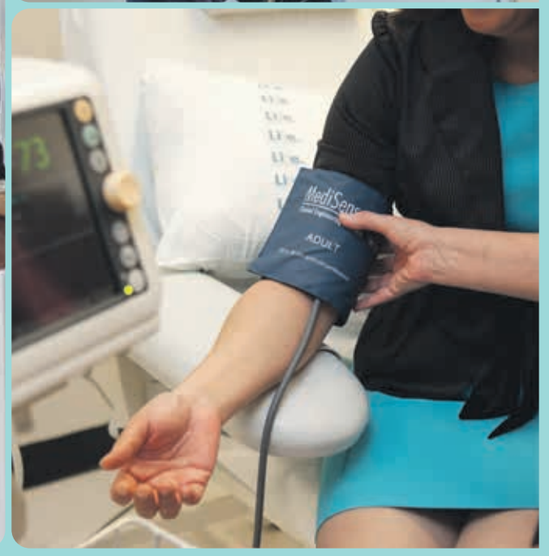
- The recruitment of critical skills, like nursing and pharmacy, became even more challenging.
  The aggressive recruitment of nurses by the public sector took the private sector by surprise. With high-paying short-term contracts of a year, the public sector attracted a significant number of nurses from the private sector, often to field hospitals that were underutilised. Short-term retention schemes for our employees need to be considered early on when there is such a high demand for a healthcare human resource.
- We could not conduct our internal audit site visits for a short period due to government-imposed restrictions. Instead, we conducted remote desktop reviews of site documentation and procedures. While the results of these audits were satisfactory, they were not as robust as results achieved through site visits.
- As a result of our clinical and clinical practice pharmacists not being able to do rounds in COVID-19 wards and forming part of the dispensing teams' split to ensure sustainability of the pharmaceutical service to the hospital, there was a decrease in activity and reporting on our AMS and clinical pharmacy programmes.
- There was an increase in HAIs, an unfortunate consequence of the required treatment protocols and approaches.
- Since visitors were not allowed at our facilities and COVID-19 patients tend to have prolonged stays, we saw a marked reduction in patient satisfaction responses, particularly in comment cards, which are physically written.
- Collaboration with the public sector (national and provincial health departments in seven provinces in which Life Healthcare operates) proved time consuming. Each province had to be approached individually by different hospital groups. Similar to a national agreement on pricing, there needs to be a national service level agreement for the referral of patients between the public and private sectors.

Positive impacts on quality indicators, which we hope to carry forward into our regular activities

- Business functions across the Group – hospital and facility management, the clinical directorate, pharmacists and nurses – collaborated well, with a strong daily focus on crucial clinical and quality matters.
- There was a marked increase in adherence to strict hygiene practices, a focus of our Spotlight on cleanliness programme. We introduced a campaign to ensure that the non-pharmaceutical interventions (handwashing, cleaning of surfaces, mask wearing and social distancing) became part of everyday behaviour. It is essential that in any disease outbreak, we support and educate employees to protect themselves using measures aligned to the mode of transmission of the disease within communities and in the clinical setting.
- An early learning to which Life Healthcare did respond promptly was the importance of psychosocial support to employees. Fear of the unknown, uncertainty of the course of the virus and isolation from family and community had serious practical and emotional consequences.
- Our AMS efforts focused on the appropriate use of antibiotics on COVID-19 patients, and this was reviewed remotely by clinical and clinical practice pharmacists supported via the ICNET system. We leveraged the results from our weekly COVID-19 audits to decrease antibiotic utilisation in the absence of bacterial co-infection and aligned to best practice guided by experts.
  The number of COVID-19 patients on antibiotics in ICUs and high-care units reduced by 10% over a four-month period from July to October 2020, and by 21% in general ward patients during the same period.

Sadly, we have lost employees due to COVID-19. They were resilient and sacrificed their lives to help those around them. We extend our heartfelt condolences to their loved ones.

07



THE FUTURE OF QUALITY AT LIFE HEALTHCARE

Our material focus areas, priorities and expectations for the future of Life Healthcare's quality outcomes:

- We will continue improving patient experience outcomes and the documentation thereof. We must ensure all quality metrics add value while balancing patient experience, clinical outcomes and the cost of healthcare. Our aim is to advance quality as a priority by developing robust measurement scorecards for complementary rehabilitation, mental healthcare, renal dialysis, Life Esidimeni and Life EHS.
- Our target setting methodologies must be developed to emphasise real improvement over driving targets. This will require engagement with hospital and facility managers to ensure they view quality holistically, in pursuit of excellence rather than compliance.
- We will partner with the clinical directorate to develop additional clinical outcome measures for new clinical products.

THE FUTURE OF QUALITY AT LIFE HEALTHCARE

EMERGING QUALITY PROGRAMMES

Critical care re-engineered

Intensive care is not only complex but also expensive, consuming a significant portion of inpatient expenses for a small number of the hospital population.

Patients and funders anticipate extraordinary care in the critical care setting, but too often ICUs do not necessarily live up to this expectation. Idiosyncratic clinical practices produce significant variation in treatment and expensive outmoded services continue to be provided.

The goal of a critical care delivery model is to provide appropriate, structured and evidence-based critical care to the appropriate patients. Every patient should receive the most appropriate and cost-effective intervention at the right time according to their need.

The focus is on an enhanced care delivery model that consists of clear ICU clinical leadership, multi-disciplinary team management and clinical care co-ordination, as well as best practice, evidence-based critical care protocols ensuring the highest quality cost-effective care to critical patients.

A set of basic outcome measures was agreed to evaluate the implementation of the critical care re-engineered enhanced care delivery model at the main ICU of each pilot hospital:

- A baseline analysis was done of the identified pilot ICUs using 2018 data and included patients who required either specialised ICU or ICU care.
- A further analysis was done on the same hospitals through the first six months of the pilot programme and compared on an annualised basis to the 2018 baseline to determine the potential impact of the programme. The analysis considered average and hospital-specific changes in certain business measures, patient complexity, clinical efficiency and clinical quality metrics.

The first six months of the pilot programme showed improved business measures including higher admissions with improved revenue, while simultaneously providing better clinical efficiency and clinical outcome measures. The programme's success ensured its continuation at selected hospitals, and the expansion of the programme to additional hospitals.

COVID-19 highlighted the need for better clinical leadership and teamwork, which placed hospitals where the programme was implemented in a better position to deal with meeting the demands of COVID-19. This stimulated a greater interest in more units joining the programme in future.

A wide range of KPIs were measured as part of the pilot programme. The most material KPIs to be reported as part of the programme are still to be determined.

The maternity integrated pathway programme

Pregnancy and childbirth are a special experience, but they can be daunting. Globally, maternity care faces challenges related to access, affordability and quality of care. Maternal and child health, and providing a positive experience for expectant parents, are key priorities for Life Healthcare.

In 2020, we prepared 11 maternity units for an innovative collaboration with our obstetricians and the Government Employees Medical Scheme Maternity Programme.

The comprehensive programme is an evidence-based clinical pathway for expectant parents and their support systems. As such, it will create a continuum of care from antenatal services through to confinement and six weeks post-delivery.

An obstetric clinical review panel of representative clinicians, led by obstetricians, will provide technical expertise. Life Healthcare midwives and partner obstetricians will co-manage antenatal care to mitigate maternal adverse events and provide better, more cost-effective clinical outcomes for patients, hospitals/facilities and obstetricians.

The programme is designed to ensure expectant parents receive the best care during pregnancy, and are able to make informed choices. It includes:

- Obstetric screening to separate high-risk from low-risk pregnancies and provide proper care for both categories
- Psychosocial support
- Provision of information and health education, to improve patients' experience of pregnancy and birth and prepare them for parenthood, whatever their risk status

It will also help establish the Life Healthcare care of the newborn enhanced care delivery model programme, as described on page 52, in our labour wards.

The indicators we will measure to gauge results and outcomes include:

- Maternal morbidity, including third and fourth-degree tears and post-partum haemorrhage
- Maternal mortality, related to normal vaginal delivery and caesarean section
- Neonatal morbidity, including birth trauma and birth asphyxia
- Early and late neonatal deaths

The stroke restore programme

Early, co-ordinated stroke care and specialised rehabilitation interventions can minimise secondary complications and disability and enhance the recovery process. Improved patient outcomes also contribute to patient satisfaction and reduce potential costly long-term care costs.

In November 2019, we initiated an end-to-end integrated care pathway based on local and international best practice guidelines and endorsement by the Medical and Allied Health Stroke Clinical Review panels.

We collaborated with the Angels Initiative to facilitate the rollout and monitoring of the stroke readiness programme at our acute hospitals, managed by regional clinical managers and stroke champions at each facility.

The implementation phase entails stroke awareness and care, standardised clinical documentation and employee training to achieve the following objectives:

- Ensuring all Life Healthcare hospitals are able to assess, treat and manage stroke patients according to international best practice
- Co-ordinating therapy services to ensure specialised neuro rehabilitative services are provided within 24 hours for all stroke patients
- Providing a continuum of stroke care from acute management to acute rehabilitation

NURSING

Our nursing excellence strategy aims to put nurses first, providing a smaller, dynamic, better-qualified, better-remunerated, professional workforce to deliver improved quality outcomes. This five-year strategy (2020 to 2025) aims to create additional skilled direct patient care time by:

- Removing administrative burden through re-engineering of processes and automation of mundane tasks
- Enhancing nursing clinical and technical competency through training, mentorship, career pathing progression and support

Initial strategic investments will be in technology, skills development, informatics, integrated workforce planning tools and mobile applications.

Medium-term investments will include education, training, mentorship and career progression.

Future investment will include enhanced technologies like remote monitoring tools, wearables and artificial intelligence.

The intended outcomes of the nursing excellence strategy

- Improved patient experience
- Better clinical outcomes
- More satisfied doctors
- Potential differentiator leading to more patients
- Network provider of choice
- Increased contribution to earnings before interest, tax, depreciation and amortisation

THE FUTURE OF QUALITY AT LIFE HEALTHCARE continued

PHARMACY

We will continue to drive Life Healthcare's vision for the role that pharmacists and clinical pharmacists play in the healthcare landscape, as aligned with international hospital best practice. These pharmacy professionals form an integral part of the multi-disciplinary healthcare team, working together to improve quality care and patient outcomes. This initiative has already delivered significant results and we look forward to taking it to the next level.

In February 2021, Life Healthcare provided commentary as part of the South African Pharmacy Council's narrow consultation forum regarding competency standards for pharmacy support personnel in South Africa. This allowed for review and clarity on the competency standards and the scope of practice for pharmacy support personnel. Once finalised this will potentially improve pharmaceutical support employees' capability and capacity, enabling pharmacists to perform more clinical work and provide quality pharmaceutical care to patients. More direct pharmacist involvement in patient care will contribute to improved patient outcomes, improved stakeholder relations and reduced costs. These are all critical components of sustainable healthcare in South Africa, and strongly linked to our Company values and overall strategy. A wide range of KPIs were measured as part of the pilot programme. The most material KPIs to be reported as part of the programme are still to be determined.

TRANSFORMATION DRIVEN BY TECHNOLOGY

Development in technology continues to transform the way we care for patients, enabling constant innovation in treatments and how we leverage big data, the Internet of Things and artificial intelligence. To ensure we use technology appropriately to drive quality improvements, we aim to build future-fit data and analytics capabilities across the Group.

If applied mindfully, emerging patient care technologies will improve patient outcomes and also serve employees by making their jobs easier. For example:

- As we broaden our healthcare delivery into step-down, sub-acute and homecare services, we will also expand quality measures across the healthcare continuum. This will require adopting new and appropriate metrics. Outpatient care will remain nurse led, supported by new technologies.
- Accurate issuing and administration of medication remains a critical risk in the area of patient safety adverse events. This is true for Life Healthcare and healthcare providers worldwide. Patient care technologies, like a proactive alert reporting system and electronic prescribing practices, will assist doctors, nurses and pharmacists to ensure patients take the right medication, at the correct dose, at the right time, and in a way that does not interfere with other medications.
- We are exploring the implementation of systems to meet the need for electronic health records in hospitals and facilities. The aim is to equip doctors, nurses and pharmacists with enhanced technologies such as devices, software and electronic health records. This will reduce the administrative workload and prioritise the use of our healthcare professionals' clinical expertise.
- We aim to implement an effective electronic clinical reporting system to support the automated analyses and reporting of specific measures. This will ease the administrative burden, improve reaction times and monitoring, and reduce adverse events. The goal is to develop this system to reach a point where we prevent adverse events, rather than react to them.

CLINICAL DIRECTORATE

The directorate is appointing a Chief Medical Officer who will be responsible for all clinical areas within Life Healthcare. We are also developing a sustainability plan to tap into the skills of newly retired doctors, so that valuable expertise is not lost.

We will continue to engage the HPCSA to amend the regulatory clause for the employment of doctors at our facilities.

ALTHOUGH TECHNOLOGICAL ADVANCEMENTS WILL DRIVE QUALITY AT LIFE HEALTHCARE GOING FORWARD, **THE HUMAN ELEMENT REMAINS CRUCIAL**. WE NEED TO ENVISION WHERE WE WANT TO BE IN THE NEXT 10 YEARS, SET BENCHMARKS, **IDENTIFY STEPS TO REACH THOSE BENCHMARKS** AND ENSURE THE TARGETS AND PROCESSES ARE ACCEPTED BY ALL EMPLOYEES AND PARTNER DOCTORS. **THIS WILL ENSURE OUR QUALITY JOURNEY REMAINS EMBEDDED IN THE GROUP'S CULTURE.**

08

APPENDICES

- KEY TERMS USED IN THIS REVIEW
- GLOSSARY OF ABBREVIATIONS
- CONTACT US

KEY TERMS USED IN THIS REVIEW

Antimicrobial stewardship (AMS)	A programme to reduce antimicrobial resistance and associated adverse events by intervention, measuring compliance to a range of best practice elements and driving continuous improvement.
Catheter-associated urinary tract infection (CAUTI)	An infection acquired while the patient is catheterised and 24 hours after removal.
Central-line-associated bloodstream infection (CLABSI)	An infections acquired while a central line is in situ and 24 hours after removal.
Clinical alerts	Refer to any unsafe condition or act, poor service delivery or complaint that could have affected the quality of service, or health and safety of an employee, customer or visitor. Potential for harm, injury or damage to property, materials, equipment or the environment is reported, although it may not have occurred.
Employee adverse events	Include falling, mobility (strains/sprains), needle sticks/sharps (body fluid/ blood), cut/puncture (no body fluids), foreign object, stacking and storage, occupational health – infection-related, occupational health other, burns, assault, motor-vehicle-related accident, equipment-related injury, injuries other, exposure to body fluid, attitude, behaviour, ethics and other.
Falling adverse events	Include slips and falls related to nursing, patient, equipment and therapy-related environment. Falling events could result in no or serious injury.
Healthcare-associated infection (HAI)	Combines all the healthcare-associated infections determined according to the CDC guidelines – VAPs, SSIs, CLABSIs, CAUTIs and other infections associated with the hospital stay.
Medication adverse events	Include prescribing, pharmacy dispensing, nursing administration and issuing errors and also other medication adverse events, such as adverse drug reactions.
MHQ-14 efficiency	A patient self-reported outcomes measure derived from the RAND Medical Outcomes Short-Form. It includes domains on vitality, social functioning, emotional functioning and general mental health.
Patient experience and PXM scores	The post-discharge survey question enquires about the patient's overall hospital and facility experience.
Patient safety adverse events	Unintended or unexpected events which did, or could, result in harm, such as falls, behaviour, medication, pressure ulcers, death due to unnatural causes, burns, procedure-related incidents, other patient incidents, patients absconding and other patient information incidents.
Patient satisfaction	Patient satisfaction refers to whether a patient's expectations were met. Patients receiving the same care will have different expectations and will therefore also have different satisfaction ratings. Satisfaction is recorded by whether patients would definitely recommend the hospital or facility they were treated at to their friends and family.
Percutaneous coronary intervention (PCI)	Angioplasty or stenting of the coronary arteries within 90 minutes from admission with an AMI.
Pressure ulcer rate	Pressure ulcers developed in Life Healthcare facilities during patients' hospital stay. A pressure ulcer is caused by the breakdown of skin tissue (not present on hospital admission) due to insufficient pressure relief.
Procedure-related adverse events	Include equipment not accounted for or found, rehabilitation equipment failure, incorrect use of rehabilitation equipment, incorrect diagnosis or treatment resulting in complications, doctors' orders not followed (excluding medication adverse events), incorrect or no identification, developed or acquired wounds, lesions and marks, procedures not followed resulting in complications or major risk to the patient, venous thromboembolism cases developed in hospital, patient documentation incorrect or incomplete, patient complication or patient compromised related to procedure or equipment, wrong site, wrong surgery, foreign object left in patient and IV therapy.
Surgical site infection (SSI)	An infection that develops up to 30 days after surgery, or within 12 months if prosthesis was inserted.
Ventilator-associated pneumonia (VAP)	Pneumonia acquired while the patient is intubated or 24 hours after extubation.

GLOSSARY OF ABBREVIATIONS

AMI	acute myocardial infarction
BSI	British Standards Institution
CDC	Centres for Disease Control
C. difficile	Clostridium difficile
CEO	Chief Executive Officer
ECT	electroconvulsive therapy
EMS	environmental management system
GCP	good clinical practice
HCAHPS	Hospital Consumer Assessment of Healthcare Providers and Systems
HPCSA	Health Professions Council of South Africa
HWSETA	Health and Welfare Sector Education and Training Authority
ICU	intensive care unit
ISO	International Organization for Standardization
IT	information technology
IV	intravenous
KPI	key performance indicator
Life EHS	Life Employee Health Solutions
LOS	length of stay
MHQ-14	Mental Health Questionnaire 14
MSA	management self-audit
OHS Act	Occupational Health and Safety Act, 85 of 1993
OHSAS	Occupational Health and Safety Assessment Series
PCI	percutaneous coronary intervention
PPD	paid patient day
PXM	patient experience measure
QMS	quality management system
SANC	South African Nursing Council
UK	United Kingdom
US	United States of America
VON	Vermont Oxford Network
WHO	World Health Organization

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