

ABOUT THIS REPORT

Mediclinic International plc ('Mediclinic' or the 'Company') is proud to publish a Clinical Services Report annually as part of a suite of reports in respect of both the 2019 calendar year and 2020 financial year.

The reporting suite listed below is available on the Group's <u>website</u>.

- 2020 Annual Report and Financial Statements
- 2020 Clinical Services Report
- 2020 Sustainable Development Report
- 2020 Notice of Annual General Meeting

SCOPE

The goal of this Report is to provide Mediclinic stakeholders with an overview of the most important clinical performance characteristics across its divisions in Switzerland, Southern Africa (South Africa and Namibia) and the United Arab Emirates ('UAE') (collectively, the 'Group') for the 2019 calendar year. Information is disclosed on a calendar year basis, unless stated otherwise.

Mediclinic reports on its material issues at a Group level, but also discloses information on divisional initiatives and performance, as this is the level at which data is collected.

This Report does not include information on initiatives undertaken by Spire Healthcare Group plc, a leading private healthcare group based in the United Kingdom and listed on the London Stock Exchange ('LSE'), in which Mediclinic holds a 29.9% interest.



COVID-19

It is also important to note that the COVID-19 pandemic falls outside this reporting period and will be discussed in detail in the 2021 Clinical Services Report.

APPROVAL

Mediclinic's Clinical Performance and Sustainable Development Committee approved this Report on 13 May 2020.

GLOSSARY OF TERMS

Capitalised terms used in this Report are defined in the *Glossary of terms* on page 62.





2020 **CLINICAL SERVICES REPORT**

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INTERNATIONAL

23

BETTER WAYS TO CONNECT

Employees keep clients at the heart of all Mediclinic does. That is the commitment behind putting Patients First.



30

BETTER WAYS TO UNLOCK VALUE

Projects focus on improving the quality of care, reducing costs for clients and providing innovative services.



CLINIQUE DES GRANGETTES

32

BETTER WAYS TO CARE

Superior clinical performance is essential to achieve Mediclinic's purpose of enhancing the quality of life.



ACCOMPLISHMENTS

A YEAR OF FIRSTS

Across the divisions, the Mediclinic clinical teams achieved a number of milestones over the past year.

■ NEW HOPE FOR LYMPHOMA

Since the beginning of December 2019, Klinik Hirslanden has been offering CAR T-cell therapy, making it the first private hospital in Switzerland to offer this treatment for two types of lymphoma. The therapy uses genetically reprogrammed white blood cells, or T-cells, to track down and eliminate malignant cells.

2 EXCELLENCE IN STEM CELL TRANSPLANTS

Klinik Hirslanden has earned JACIE accreditation (refer to page 54) for its autologous blood stem cell transplant service, the only private hospital in Switzerland with these credentials. In this type of transplant, stem cells are harvested from a patient, treated and reinfused. The quality of the procedure is critical and patients can rest assured that Klinik Hirslanden carries this stamp of approval.

CERTIFIED FOR TRAUMA

As the first Mediclinic hospital in Southern Africa with Level 2 Trauma status, Mediclinic Pietermaritzburg is uniquely qualified to handle emergencies. The accreditation by the Trauma Society of South Africa recognises the hospital's ability to provide definitive trauma care regardless of the severity of injury.

4 IMPROVING PROSTATE BIOPSIES

Dr Mahesh Dhanjee, urologist at Mediclinic Newcastle, is the first in South Africa to use the BK fusion system for prostate biopsies daily. This technology fuses MRI scans with real-time ultrasound images to increase the accuracy of the biopsy. According to Dr Dhanjee, the system has increased the detection of prostate cancer from 39% to 59% for some doctors.

5 SPINE REPAIRED BEFORE BIRTH

In a first for Africa, Prof. Ermos Nicolaou and his team at Mediclinic Morningside in South Africa carried out surgery on a 25-week-old foetus with spina bifida. The delicate procedure on 13 April 2019 was led by Prof. Mike Belfort of the United States. By repairing the hole in the spine before birth, the operation dramatically improves the child's outlook and the chance of being able to walk independently.

6 TAKING ON HEARING LOSS

A multidisciplinary team at Mediclinic Al Jowhara successfully carried out cochlear implants for bilateral sensory neural hearing loss, the first such case for Mediclinic Middle East. Diagnosed with hearing loss at birth, the child of a year and a half can now hear in both ears.

7 RELIEF FROM ENLARGED PROSTATE

Mediclinic Middle East made history by performing the first Rezum procedure in the UAE at Mediclinic Parkview Hospital. On 26 January 2020, Dr Adib Al Attar carried out the 15-minute procedure, which uses radio-frequency heated steam to

ablate prostate tissue and reduce

the size of the gland.

8 BETTER REMOVAL OF BILE DUCT STONES

Dr Mazin Aljabiri became the first doctor in a private hospital in the UAE to use SpyGlass in the removal of bile duct stones and diagnosis of difficult cases. Using a probe attached to a tiny camera, this innovative technology enables direct visualisation within the ducts for accurate (99–100%) diagnosis.

9 QUICKER RECOVERY FROM LIVER OP

On 20 February 2020, Prof. Amir Nisar and Dr Zakir Mohamed of Mediclinic Parkview performed the UAE's first ever laparoscopic resection of liver metastasis at the same time as colon cancer resection. The minimally invasive procedure meant the patient was ready for discharge just three days after the seven-hour surgery to the liver and a section of his colon.

FOREWORD



Dr Felicity HarveyChair of the Clinical Performance and Sustainability Committee

The healthcare environment is being transformed by a variety of forces. Not only is the global population ageing, but people are also living longer with multiple long-term conditions. Free information, apps and devices are empowering individuals to monitor their fitness and health, which shapes their engagement with healthcare. At the same time technological breakthroughs are enabling us as healthcare companies to do things differently.

Around the world the regulatory environment is changing in response to the rate of technological and pharmaceutical development, the changes in service delivery that this enables and the needs of their populations. We must address all these issues in a fragile world where there is a real need to use resources more sustainably.

Mediclinic is extremely well positioned to manage these changes while delivering clinical excellence. To address demand for healthcare that is more convenient, the Group is expanding across the continuum of care, with the mix of in-hospital and out-of-hospital treatment in step with the changing environment, patient convenience and governmental regulations. Both on our own and with partners, we are seeking to provide care for every step of the journey, from wellbeing and prevention to acute care and recovery.

It is essential our clients know that Mediclinic is a healthcare provider they can trust - one that is transparent about the quality of care provided and that considers patient safety paramount. In 2019, the Company did crucial work in this regard by strengthening Ward-to-Board accountability. Every division now has a Clinical Performance Committee ('CPC'), where possible assisted by external advisors who have a direct link to the Clinical Performance and Sustainability Committee, and then through to the main Board. This framework is vital for underpinning the patient safety culture and ensuring constant improvement.

The power of Mediclinic is that we work as one, not three separate divisions. Close working relationships between the Group and divisional chief clinical officers and Clinical Services functions enable learning to be shared across the Group. This means that when there are challenges, we learn once and then share the lessons across the Group.

This cross-country insight is hugely beneficial in the current healthcare crisis. The COVID-19 pandemic is the biggest infectious threat the world has ever seen and calls for new solutions and closer collaboration than ever before. In countries everywhere, public and private healthcare are working together for the public good. Thanks to close working relationships with

It is essential our clients know that Mediclinic is a healthcare provider they can trust – one that is transparent about the quality of care provided and that considers patient safety paramount.

governments in the regions where the Company is active, Mediclinic has been part of the solution from the beginning.

In this, as in every healthcare situation where clients turn to us, they can rest assured that we are ever improving and enhancing the quality of our services. Our values – of being client centred, trusting and respectful, performance driven, team orientated and patient safety focused – are not just empty statements, they are at the core of who we are and what we do.



Dr Felicity Harvey

Chair of the Clinical Performance and Sustainability Committee

INTRODUCTION

OUR CLIENTS AT THE CENTRE

Dr René Toua, Group Chief Clinical Officer, reflects on developments in healthcare and how Mediclinic strives to enhance the quality of life of clients.



Dr René Toua,Group Chief Clinical Officer

You worked in emergency medicine for several years. How did that experience shape your thinking around clinical care?

Emergency medicine is marked by complexity, uncertainty and experiencing people when they are at their most vulnerable. I saw the full spectrum of trauma cases, from the humorous to the heart-wrenching. The ones that I remember the best are the ones that keep me humble, where I learned how easy it is to make a mistake, and the ones in which a life was saved.

I learned to see each patient as an individual, considering their physical, mental and social circumstances to be able to offer 'whole person care', and involving them in deciding what treatment plans are best for their unique circumstances.

Mediclinic strives to always put Patients First. What does that mean to you?

To be truly patient centric, all processes need to start with the patient in the middle. Enough time must be spent to understand the true needs of the patient. Even though patient centricity is lived in Mediclinic, more can be done to understand patient needs.

A How are developing healthcare needs informing Mediclinic's business?

The Group is expanding across the continuum of care so that care is delivered in the most appropriate care setting at an appropriate cost. The focus in healthcare is shifting from 'sick care' to 'health care' with the prevention of disease and an increase in wellbeing becoming the top priorities. Our modern lifestyle takes a toll on mental health and the need for mental health services is ever increasing. Expansion across the continuum of care will widen the focus, improve accessibility and create the opportunity to form a lasting relationship with our clients and not only when they become patients.

The COVID-19 pandemic has put the spotlight on healthcare services. What does it mean for Mediclinic?

We are well positioned to handle the crisis thanks to our global footprint which allows for collective learning from divisions that are in various stages of the pandemic. All divisions have strong clinical management teams at hospital and Corporate Office level supported by experts in the Group. The availability of resources and equipment is a critical success factor in the handling of the pandemic, and this is well managed by a centrally coordinated procurement team.

I saw the full spectrum of trauma cases, from the humorous to the heart-wrenching.



The pandemic has also made the world more aware of infection prevention and control ('IPC'). How does Mediclinic ensure that IPC is implemented to the highest standard?

IPC is always top of mind across all divisions and is part of standard care. This is especially true for Southern Africa where we have a high burden of infectious diseases, particularly tuberculosis and HIV. IPC experts are deployed at various levels across the organisation and follow international guidelines and best practices.

Q The Group provides care in three different regions. How do you ensure quality across all the divisions?

Mediclinic ascribes to basic care standards that may vary slightly across divisions in detail but are universally accepted as the core standards and processes that must be in place. We have a central governance structure that reaches across the organisation and into hospitals, and which is supported by external experts. In addition, we closely collaborate with regulators, professional societies, medical practice insurers and healthcare funders to externally monitor the quality of our care and the perception of the Company. Shared learnings are essential to embed quality improvement and other initiatives and to spread

superior performance across the organisation. Incorporating best practices in everyday work and giving positive feedback to staff are some of the practical ways in which the excellence is translated across the entire network.

How do you see digitalisation transforming care at Mediclinic?

Digital solutions are necessary for the next stage in healthcare. electronic health records ('EHRs') enable significantly improved care; allow for digital transformation; create a rich dataset that can be mined for better insight; provide data and opportunities for research; and allow us to build a long-term relationship with clients. In addition, EHRs create opportunities to reduce cost and for greater efficiency through automation. With the COVID-19 pandemic, we are also exploring telemedicine options.

The use of analytics is one of the pillars supporting the Group's clinical services. What are some of the most exciting applications?

Our use of analytics goes beyond measuring and benchmarking clinical performance – it informs how we profile clinical risk, develop treatment pathways, analyse healthcare trends and create alternative reimbursement models. In short, it enables us to optimise our care and offer our clients the best possible treatment. Mediclinic

has also invested in machine learning capability to enable patient-facing analytics, which is an exciting move to a more proactive system based on prevention, wellness, faster diagnosis and precision of treatment.

Why do top medical practitioners choose to work with and at Mediclinic?

Mediclinic and Hirslanden are very strong brands associated with ethical business and other practices. Our infrastructure and equipment are well maintained and fit-for-purpose. Medical practitioners are respected, valued partners in patient care and are supported by clinical and other management teams. Mediclinic furthermore supports evidence-based medicine and a culture of patient safety.

What does achieving this level of quality care mean for investors?

The healthcare industry is transforming from fee-for-service to value-based remuneration.

Organisations are evaluated on the value they create, not only for patients but in their approach to the wider industry and the community. Mediclinic's focus on clinical performance and patient-centred care contributes to better clinical outcomes, better patient experience and lower cost, which means better financial outcomes.

AT A GLANCE1

A UNIQUELY INTEGRATED INTERNATIONAL HEALTHCARE PARTNER

Mediclinic is an international private healthcare services group, established in South Africa in 1983, with divisions in Switzerland, Southern Africa (South Africa and Namibia) and the UAE.

SWITZERLAND

Hirslanden, the leading private healthcare provider in Switzerland, is recognised for clinical excellence and outstanding patient experience www.hirslanden.ch

SOUTH AFRICA AND NAMIBIA

Mediclinic Southern Africa is one of the three major private healthcare providers in the region with a relentless focus on offering value to all its partners and clients

THE UAE

Mediclinic Middle East has established a trusted brand and strong reputation in this developing region by offering clinical care of internationally recognised standards www.mediclinic.ae

THE UK

Mediclinic has a 29.9% stake in Spire







Sub-acute³ and specialised hospitals⁴



11 623





14
Day case clinics⁵

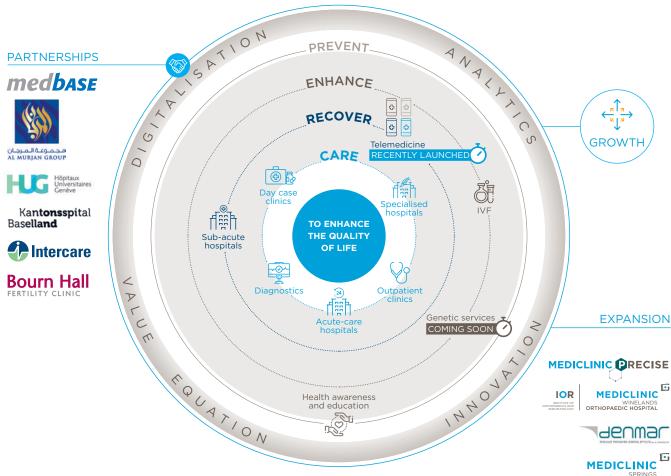


21
Outpatient clinics⁶



EXPANDING ACROSS THE CONTINUUM OF CARE

Mediclinic is focused on providing specialist-orientated, multidisciplinary services across the continuum of care in such a way that the Group will be regarded as the most respected and trusted provider of healthcare services by clients, medical practitioners, healthcare insurers and regulators of healthcare in each of its markets.



Notes

- ¹ Figures disclosed at 31 March 2020.
- 2 Provides patient treatment with specialised medical and nursing staff, and medical equipment.
- ³Provides comprehensive goal-orientated inpatient care designed for a patient who has had an acute illness, injury or exacerbation of a disease process.
- ⁴Provides specialised in-hospital care, catering for single specialities such as a cardiac hospital, paediatric hospital, etc.
- ⁵Provides elective procedures, surgical procedures and planned medical procedures, but admits and discharges patients on the same day.
- ⁶Provides consultations (by general practitioner, specialist or allied healthcare professional) with no theatre facilities.

BUSINESS MODEL

Mediclinic's business model enables it to quickly respond to opportunities and risks, while safeguarding clients, employees and the interests of stakeholders. The Group is expanding the horizon of what care can be.

THE OUTCOME

83.9%

Group grand mean score for Press Ganey® patient experience survey¹

2%

compounded growth in admissions in the past five years

3

Market-leading positions in three geographies

83%

Participation in Gallup® employee engagement survey

THE CARE

PUTTING PATIENTS FIRST

By taking a holistic view of clients' needs, Mediclinic is focused on improving all aspects of the healthcare value equation – clinical outcomes, client experience and cost. The Group is ensuring that clients are able to receive quality care in the right care setting at a cost that is fair, predictable and transparent. It also maintains dialogue with clients and communities through public health awareness campaigns aimed at improving lifestyle choices and overall health.

MAINTAINING CLINICAL EXCELLENCE

With more than 115 healthcare facilities across four countries, Mediclinic applies stringent quality standards regardless of location. The Group provides care and facilities of international standard with more than 10 different accreditations and certifications and various international benchmarking initiatives to meet local requirements.

THE FOUNDATION

EXPERTISE

With experience and insight gained over more than three decades of maintaining market-leading positions in diverse geographies, the Group has created expertise that spans across all aspects of the business – from client care, patient safety, nursing and specialised medicine to facility management, procurement and finance, and acquisitions.

EMPLOYEES

Mediclinic's employees play a pivotal part in achieving its strategic goals. To empower every employee, the Group continuously builds on a culture that is client centred; trusting and respectful; patient safety focused; performance driven; and team orientated. Through its strategies dedicated to diversity and inclusion, and attracting and retaining top talent, Mediclinic secures its future.

We exist to care for our clients when they are at their most vulnerable. Herein lies our true value: harnessing the exceptional talent, compassion and energy of Mediclinic employees and partners to ensure our clients receive cost-effective, quality care and outstanding client experiences. Dr Ronnie van der Merwe, Group Chief Executive Officer

Trusted by eight tertiary institutions across all three divisions to help train the healthcare workers of tomorrow



Constituent of FTSE4Good



Economic contribution to monthly salaries



Signatory of the CDP (originally the **Carbon Disclosure** Project)

FINDING BETTER WAYS TO CARE

In order to align its service offering with the needs of clients, Mediclinic is expanding its core operations to position itself as an integrated healthcare provider across the continuum of care. Through innovation, acquisition, partnerships and expansion, the Group is expanding to provide a seamless suite of healthcare services that prevent, treat and recover, all under the umbrella of a single, connected system.

LEVERAGING KNOWLEDGE **AND SCALE**

The power of Mediclinic is that it operates as a Group, not three separate divisions. Close working relationships enable learning to be shared across geographies. Highly specialised medicine and cancer care, procurement synergies and enterprise resource management have been established as a direct result - all enhancing Mediclinic's services and efficiency.

STAKEHOLDERS

Mediclinic listens carefully to how stakeholders feel and what they want. Strong relationships lie at the heart of its ability to enhance the quality of life. By engaging on key issues, it not only ensures close cooperation and coordination with government and regulatory role players, it's also able to realise public-private partnerships ('PPPs') and seize business opportunities which expand its services, help it achieve its strategic goals, and diversify revenue streams.

FUTURE VISION

The Group provides care in a world that is being reshaped by evolving client needs, regulatory frameworks and climate forces. This calls for a sustainable approach in everything it does, from the way it utilises natural resources and engages with employees to the type of investments it makes and how it conducts business.

FINANCE

Mediclinic has a strong financial profile, supported by an extensive property portfolio. The Group has good access to capital and a disciplined capital allocation approach.

ENABLED BY THE MEDICLINIC GROUP STRATEGY:



PURPOSE

To enhance the quality of life



VISION

To be the partner of choice that people trust for all their healthcare needs

ORGANISATIONAL VALUES



Client centred



Trusting and respectful



Patient safety focused Performance driven



Team orientated

STRATEGIC GOALS



Goal 1: To become an integrated healthcare provider across the continuum of care:



Goal 2: To improve our value proposition significantly;



Goal 3: To transform our healthcare services and client engagement through digitalisation;



Goal 4: To evolve as an analytics-driven organisation;



Goal 5: To strengthen our position as the employer



of choice; Goal 6: To grow in existing



markets and expand into new markets: and



Goal 7: To achieve superior long-term financial returns.

TRANSFORMATION DRIVERS



Innovation



Sustainable development



Read more in the 2020 Annual Report at annualreport.mediclinic.com.

EXPERTISE YOU CAN TRUST

Score negatively impacted by Hirslanden experiencing an interruption in surveying.

SWITZERLAND HIRSLANDEN







Secondary care community hospitals



Tertiary care city hospitals



Full-time employees



Day case clinics1



Outpatient clinics



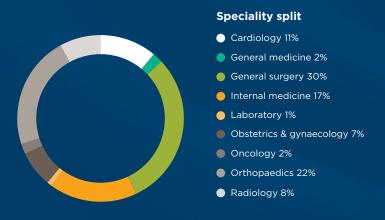


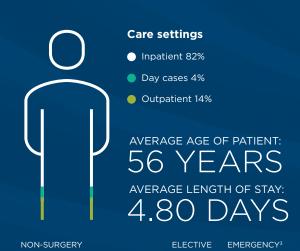


OUTPATIENT CARE V ROUTINE PROCEDURES V SPECIALISED TREATMENTS

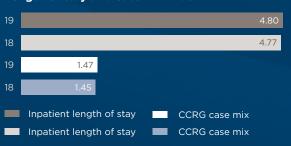
🗸 ADVANCED TECHNOLOGY 🗸 RESEARCH AND TRAINING







Length of stay and case mix index²





certification for all facilities

 1 At 1 April 2020, Hirslanden's day case clinics increased to three with the acquisition of Operationszentrum Zumikon.

²Case mix indices of the divisions were calculated by using the internally developed clinical and cost-related grouping ('CCRG'). Case mix refers to the characteristics of patients served, where some have more complex medical conditions which may influence outcomes. For more information on the importance of case mix, refer to page 36. High case mix index for Hirslanden mainly due to high load of complex and technologically advanced cases in an older population; low case mix index for Mediclinic Middle East due to its younger patient population.

³Reflecting inpatient and day case admissions only for all divisions. At Hirslanden, major trauma, neonatal intensive care and advanced critical care handled by cantonal and university teaching facilities.

GERMANY



Hospitals

Canton of Aarau

1 Hirslanden Klinik Aarau¹

Canton of Appenzell Ausserrhoden

2 Klinik Am Rosenberg

Canton of Basel-Land

3 Klinik Birshof

Canton of Bern

- 4 Klinik Beau-Site
- 5 Klinik Linde¹
- 6 Klinik Permanence
- 7 Salem-Spital¹

Canton of Geneva

- 8 Clinique La Colline
- Olinique des Grangettes¹

Canton of Lucerne

- 10 Klinik St. Anna¹
- 11 St. Anna in Meggen

Canton of St. Gallen

12 Klinik Stephanshorn¹

Canton of Vaud

- 13 Clinique Cecil¹
- 14 Clinique Bois-Cerf

Canton of Zug

15 AndreasKlinik Cham Zug¹

Canton of Zurich

- 16 Klinik Hirslanden¹
- 17 Klinik Im Park¹

Day case clinics

Canton of Lucerne

1 St. Anna im Bahnhof

Canton of Zurich

- 2 Operationszentrum Bellaria
- 3 Operationszentrum Zumikon²

Outpatient clinics

Canton of Bern

- Praxiszentrum am Bahnhof Bern
- 2 Praxiszentrum am Bahnhof Düdingen

Canton of Schaffhausen

Praxiszentrum am Bahnhof Schaffhausen

Notes

- ¹ Hospital with obstetrics department.
- ² Acquisition of Operationszentrum Zumikon effective 1 April 2020.

SOUTH AFRICA & NAMIBIA MEDICLINIC SOUTHERN AFRICA









Sub-acute and specialised hospitals





Emergency transport

bases in South Africa



Day case clinics



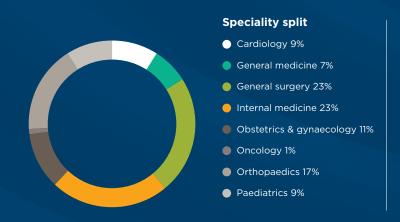
ROUTINE PROCEDURES SPECIALISED TREATMENTS TRANSPLANT MEDICINE

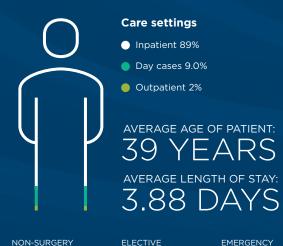




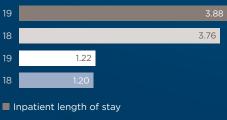
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Length of stay and case mix index

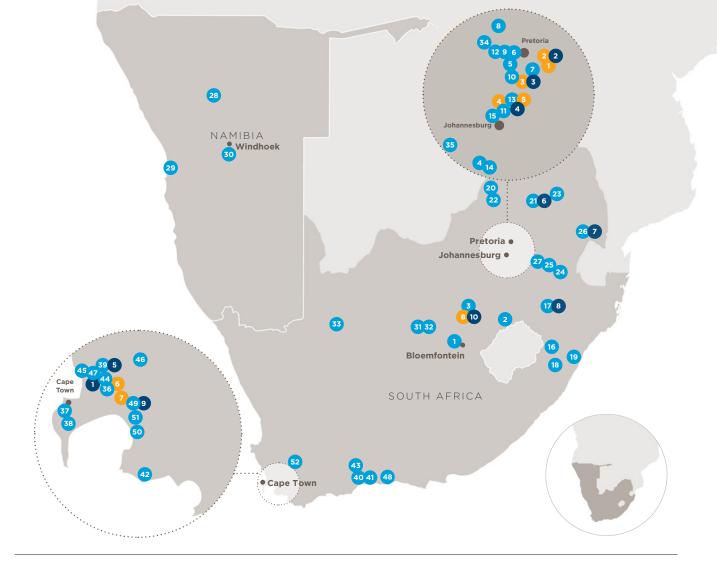


■ Inpatient length of stay

- CCRG case mix
- CCRG case mix



ISO 14001:2015



Hospitals

Free State

- 1 Mediclinic Bloemfontein
- 2 Mediclinic Hoogland
- 3 Mediclinic Welkom

Gauteng

- 4 Mediclinic Emfuleni
- Mediclinic Gynaecological Hospital
- 6 Mediclinic Heart Hospital
- 7 Mediclinic Kloof
- 8 Mediclinic Legae
- 9 Mediclinic Medforum
- 10 Mediclinic Midstream
- 11 Mediclinic Morningside
- 12 Mediclinic Muelmed
- 13 Mediclinic Sandton
- 14 Mediclinic Vereeniging
- Wits Donald Gordon Medical Centre¹

KwaZulu-Natal

- 16 Mediclinic Howick
- 17 Mediclinic Newcastle
- 18 Mediclinic Pietermaritzburg
- 19 Mediclinic Victoria

Limpopo

- 20 Mediclinic Lephalale
- 21 Mediclinic Limpopo
- 22 Mediclinic Thabazimbi
- 23 Mediclinic Tzaneen

Mpumalanga

- 24 Mediclinic Ermelo
- Mediclinic Highveld
- 26 Mediclinic Nelspruit
- 27 Mediclinic Secunda

Namibia

- 28 Mediclinic Otjiwarongo
- 29 Mediclinic Swakopmund
- 30 Mediclinic Windhoek

Northern Cape

- Mediclinic Gariep (part of Mediclinic Kimberley)
- 32 Mediclinic Kimberley
- 33 Mediclinic Upington

North West

- 34 Mediclinic Brits
- 35 Mediclinic Potchefstroom

Western Cape

- 36 Mediclinic Cape Gate
- 37 Mediclinic Cape Town
- 38 Mediclinic Constantiaberg
- 39 Mediclinic Durbanville
- 40 Mediclinic Geneva
- 41 Mediclinic George
- 42 Mediclinic Hermanus
- 43 Mediclinic Klein Karoo
- 44 Mediclinic Louis Leipoldt
- 45 Mediclinic Milnerton
- 46 Mediclinic Paarl
- 47 Mediclinic Panorama
- 48 Mediclinic Plettenberg Bay
- 49 Mediclinic Stellenbosch
- 50 Mediclinic Strand
- 51 Mediclinic Vergelegen
- 52 Mediclinic Worcester

Sub-acute and specialised hospitals

- 1 Denmar Specialist Psychiatric Hospital
- 2 Intercare Sub-Acute Hospital Hazeldean

- 3 Intercare Sub-Acute Hospital Irene
- 4 Intercare Medfem Hospital
- 5 Intercare Sub-Acute Hospital Sandton
- Intercare Sub-Acute Hospital Tyger Valley
- 7 Mediclinic Winelands Orthopaedic Hospital
- 8 Welkom Medical Centre Sub-Acute Hospital

Day case clinics

- 1 Intercare Day Hospital Century City
- 2 Intercare Day Hospital Hazeldean
- 3 Intercare Day Hospital Irene
- 4 Intercare Day Hospital Sandton
- Mediclinic Durbanville Day Clinic
- 6 Mediclinic Limpopo Day Clinic
- 7 Mediclinic Nelspruit Day Clinic
- Mediclinic Newcastle
 Day Clinic
- 9 Mediclinic Stellenbosch Day Clinic
- Welkom Medical Centre
 Day Clinic

THE UAE

MEDICLINIC MIDDLE EAST



7



2
Day case clinics



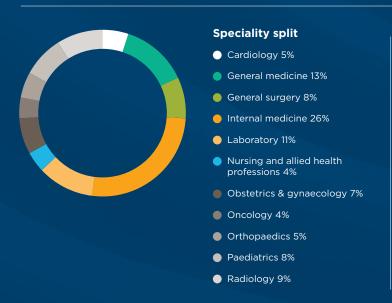
18
Outpatient clinics

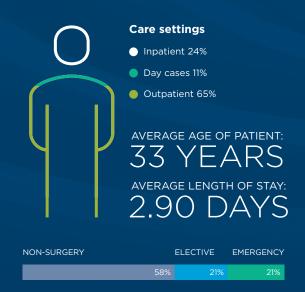


6 700+

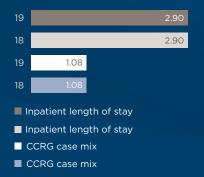
OUTPATIENT CARE V ROUTINE PROCEDURES V SPECIALISED TREATMENTS

ADVANCED TECHNOLOGY PRESEARCH AND TRAINING





Length of stay and case mix index



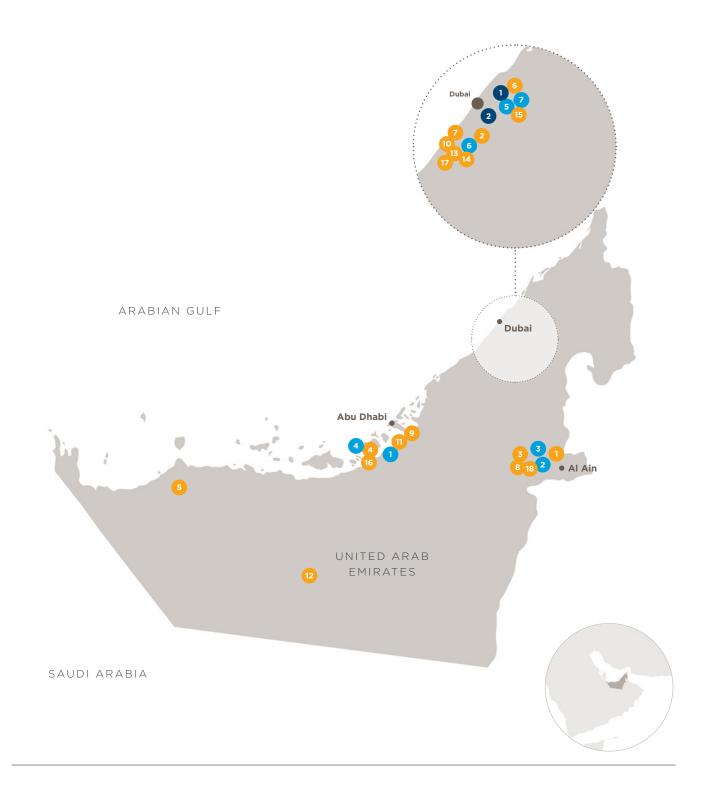
accreditation for all facility accreditation Mediclinic Chospital lab

ISO 15189:2009

certification for all laboratories

Notes

- ¹ Joint Commission International ('**JCI**').
- ² College of American Pathologists ('CAP').



Hospitals

- 1 Mediclinic Airport Road Hospital
- 2 Mediclinic Al Ain Hospital
- 3 Mediclinic Al Jowhara Hospital
- 4 Mediclinic Al Noor Hospital
- 5 Mediclinic City Hospital
- 6 Mediclinic Parkview Hospital
- 7 Mediclinic Welcare Hospital

Day case clinics

- 1 Mediclinic Deira
- 2 Mediclinic Dubai Mall

Outpatient clinics

- 1 Mediclinic Al Bawadi
- 2 Mediclinic Arabian Ranches
- 3 Mediclinic Al Madar
- 4 Mediclinic Al Mamora
- 5 ENEC
- 6 Mediclinic Al Qusais
- 7 Mediclinic Al Sufouh
- 8 Mediclinic Al Yahar
- 9 Mediclinic Baniyas
- 10 Mediclinic Ibn Battuta

- 11 Mediclinic Khalifa City
- 12 Mediclinic Madinat Zayed
- 13 Mediclinic Meadows
- Mediclinic Me'aisem
- 15 Mediclinic Mirdif
- 16 Mediclinic Mussafah
- 17 Mediclinic Springs
- 18 Mediclinic Zakher

THE HEALTHCARE LANDSCAPE

Mediclinic provides a wide range of clinical services throughout its divisions. Each division operates in a different context, dealing with distinct burdens of disease and working within different governmental frameworks.

	HIRSLANDEN	MEDICLINIC SOUTHERN AFRICA	MEDICLINIC MIDDLE EAST	
Main medical issues	Communicable (infectious) diseases/trauma			
	Burden of communicable (infectious) diseases and trauma is very small	Burden of disease consists mainly of communicable (infectious) diseases	Burden of disease mainly consists of chronic lifestyle diseases and communicable (infectious) diseases	
	Chronic diseases			
	Burden of disease consists mainly of chronic diseases commonly associated with lifestyle and old age Chronic underlying medical conditions may significantly impact the level of care received and/or length of stay	Chronic diseases more prevalent in medical scheme-covered population, followed by communicable diseases and trauma In 2019, 43.6% of patients admitted had chronic underlying medical conditions; 60% of adult patients admitted were overweight or obese	Chronic underlying medical conditions may significantly impact the level of care received and/or length of stay	
	Most common chronic diseases			
	Hypertension, ischaemic heart disease and hyperlipidaemia most common chronic diseases	Hypertension, diabetes mellitus and hyperlipidaemia most common underlying chronic conditions	In 2019, the chronic diseases most prevalent in admissions were diabetes, hypertension and hyperlipidaemia	
Medical practitioner employment	Most admitting medical practitioners self-employed, while medical practitioners working in the fields of hospital-based specialities, such as anaesthetics, internal medicine and emergency medicine, employed at certain hospitals In most instances, radiology, nuclear medicine and radiation oncology services owned and operated by hospitals	Admitting medical practitioners, excluding emergency medicine practitioners within certain emergency centres, self-employed and practise independently Radiology, laboratory and oncology services provided by independent practices	Employs most of the medical practitioners who work in the hospitals and clinics Owns and operates the laboratory and radiology services	

	HIRSLANDEN	MEDICLINIC SOUTHERN AFRICA	MEDICLINIC MIDDLE EAST
Governance	Quality Manager, Infection Control Specialist and Critical Incident Manager, as well as subcommittees for quality, IPC and critical incident reporting at every hospital Corporate Office Clinical Services department coordinates subcommittee activities, monitored by clinical key performance indicators ('KPIs'), and performs audits on various clinical policies Affiliated medical practitioners integrated into this structure by established boards in several specialities	Each hospital's Patient Safety Manager, Infection Control Specialist and several subcommittees tasked with overseeing patient safety, IPC and antimicrobial stewardship ('AMS') initiatives and reviewing patient safety events Hospital Clinical Managers enable more integrated approach by acting as conduit between management and medical practitioners Regional Clinical Manager supports the hospital clinical teams	 Medical Directors at all hospitals and lead physicians at clinics coordinate and oversee the clinical activities in the facility Clinical hospital committees at each hospital Multidisciplinary medical affairs board provides clinical oversight in hospitals by providing feedback to senior management team Six subcommittees of the clinical hospital committees including IPC, clinical risk management, credentialing and privileging, research and ethics, quality and patient safety, and pharmacy and therapeutic committees
Clinical quality	All treating and admitting medical practitioners registered with the registry for medical professions of the Swiss government Affiliation follows strict entry criteria and comprehensive credentialing process, assisted by clinical committee Medical practitioners evaluated at least annually on case numbers, infections, re-operations and liability cases Abnormalities investigated by hospital management Anonymous means to report performance problems, which hospital management teams and medical practitioner committees address Insufficient performance improvements lead to de-accreditation	 All treating and admitting medical practitioners registered with the Health Professions Council of South Africa ('HPCSA') or Health Professions Council of Namibia ('HPCNA') Medical practitioners work within scope of defined clinical disciplines as determined by HPCSA/HPCNA registration Performance and clinical outcomes monitored by CPCs composed of medical practitioners working at hospital, supported by hospital general managers and regional and Corporate Office teams 	 All physicians licensed with the relevant authority in the UAE (Dubai Health Authority, Dubai Healthcare City Authority, Department of Health) Standardised physician performance appraisal process includes reviewing feedback from peers and patients, clinical KPIs and any incidents and quality-related complaints Clinical privileges reviewed annually and depend on physician's activity during the past year and additional skills obtained Comprehensive incident reporting and concerns addressed by Medical Director and Clinical Quality Patient Safety Committee All patient complaints investigated Immediate action taken if problem arises, including counselling, remedial action, review of privileges or, if appropriate, termination of privileges

THE VALUE EQUATION



COST

SUMMARY

Three critical areas define the value equation in healthcare – clinical outcomes, client experience and cost

At the heart of Mediclinic lies its Patients First philosophy, supported by the organisational values of being client centred; trusting and respectful; and patient safety focused. Mediclinic's value proposition is a key factor in pursuit of its purpose and realisation of its vision. It directly addresses a key industry challenge: the affordability of healthcare. In this regard Mediclinic sees itself very much as part of the solution.



IMPORTANCE

Mediclinic employees and associated medical practitioners form the foundation from which the Group is able to offer its services to patients and communities, which in turn allows it to unlock value for all

stakeholders and pursue its vision to be the partner of choice that people trust for all their healthcare needs.

In this, the Group is dedicated to partnering with all its stakeholders.

As the partner, the Group is positioned to have long-term relationships that extend beyond isolated interactions and trusted to deliver measurable, quality outcomes and transparent reporting.

LINK TO MEDICLINIC GROUP STRATEGY

GOAL STAKEHOLDER GROUPS SUB-GOALS Goal 2 Clients, employees and potential • Significantly improve the patient To improve our applicants, governments and experience value proposition authorities, healthcare insurers, • Improve clinical outcomes significantly industry partners and medical · Significantly reduce the 'cost of practitioners us' (the 'cost' aspect of the value equation is reported on in the 2020 Sustainable Development Report on page 39)

ANALYTICS

SUMMARY

One of the Group's strategic goals is to evolve as an analytics-driven organisation. Critical success factors in achieving this goal are the availability and processing of high-quality data, and the unlocking of valuable insights from data by leveraging the next generation of analytical technologies such as machine learning.

During the year, the Analytics and Reporting, Enterprise Information Management and Health Information Management departments integrated to form the Data Science and Information Management function in order to unlock greater efficiencies and to formulate and implement a holistic data management and analytics strategy in 2020.

"

One of the Group's strategic goals is to evolve as an analytics-driven organisation.

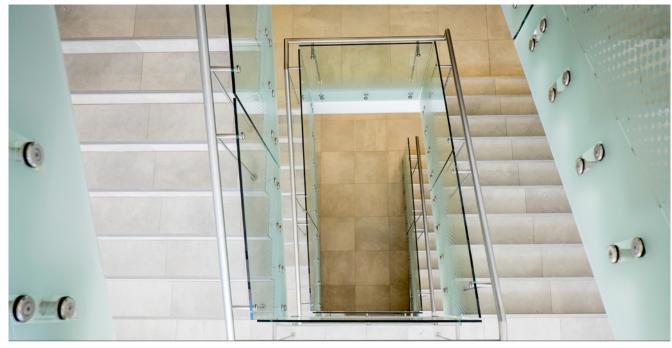
IMPORTANCE

Analytics draws on the wealth of data to improve the business. Over many years, Mediclinic has built the tools and capabilities to translate healthcare and client data into decision enablers.

LINK TO MEDICLINIC GROUP STRATEGY

GOAL	STAKEHOLDER GROUPS	SUB-GOALS
Goal 5 To evolve as an analytics-driven organisation	Clients, employees and potential applicants, medical practitioners, healthcare insurers, industry partners	 Enable fact-based strategic and operational decisions across the Group Improve and manage data assets Implement data-driven innovation

The newly formed department was established only in December 2019. As such, detailed reporting on the data management strategy and the sub-goals mentioned above will be reported on only in the **2021 Clinical Services Report.**



PERFORMANCE SUMMARY

A summary of the key focus areas and progress against established sub-goals during the reporting period.

PROGRESS			
Group-wide	Hirslanden	Mediclinic Southern Africa	Mediclinic Middle East
CLINICAL GOVERNANCE			
Refined and optimised the clinical governance structure to enforce the Ward-to-Board accountability framework	Commenced implementation of Ward-to-Board accountability framework Introduced doctors' committee at divisional level	Appointed additional Hospital Clinical Managers Continued with implementation of new clinical performance, oversight and governance model in collaboration with supporting medical practitioners	Implemented Ward-to-Board accountability framework Implemented quality management framework Defined and aligned clinical risk management strategy to the Group Developed clinical model for cost per event ('CPE') and diagnostic-related grouping ('DRG') use
CLINICAL PERFORMANCE			
 Roll-out of new clinical indicators, including the standardised infection ratio ('SIR') model for surgical site infections ('SSIs') and refinement of existing indicator definitions and expansion of categories Supported the divisions in eradicating never events and decreasing the number of serious adverse events ('SAEs') Enhanced collaboration between divisions with working groups on obstetric safety and surgical safety 	Assessed adherence to the safe surgery checklist through 16 unannounced audits with an average score of 92% Identified patient pathways that qualify for standardisation, especially in terms of fast-track orthopaedics Indications board policy prepared and applied to surgery of the vertebral column and vessel surgery at pilot hospitals Defined criteria of system provider model and determined level of adherence at hospital level	Developed action plans in collaboration with medical practitioners to prevent adverse events Developed hospital-specific action plans aimed at improving clinical performance Enhanced the national hand hygiene strategy to further improve hand hygiene compliance Implemented additional components of the AMS strategy Reviewed and refined the comprehensive IPC strategy Implemented clinical initiatives aimed at significantly improving obstetric care Completed final phase of the national stroke management implementation plan Publicly published subset of hospital-specific clinical performance results	All facilities successfully accredited/re-accredited by the JCI Refined hospital-level clinical structures Refined clinical strategy for Abu Dhabi and Al Ain Further developed and expanded coordinated care initiatives Defined clear strategy for establishing Centres of Excellence ('CoEs') Established trauma and urgent care centres Established 24-hour paediatric service at Mediclinic Welcare Hospital and Mediclinic Parkview Hospital

PROGRESS					
Group-wide	Hirslanden	Mediclinic Southern Africa	Mediclinic Middle East		
DIGITALISATION AND ANA	LYTICS				
 Supported Hirslanden and Mediclinic Middle East with EHR implementation Supported Mediclinic Southern Africa in the evaluation of EHR systems Established a machine learning capability 	Radiology information system pilot at Klinik Im Park completed and rolled out to Klinik Stephanshorn Roll-out of patient data management system ('PDMS') for intensive care and anaesthesia at Klinik Hirslanden Introduced standardised documentation approach for medical practitioners in the EHR and commenced pilot project at Klinik Stephanshorn	Dedicated taskforce appointed to manage EHR process and continued action plans aimed at improving implementation readiness	Continued EHR roll-out Ensured compliance with health information exchange ('HIE') requirements in Abu Dhabi		
INDUSTRY EVENTS					
n/a	Hosted Hirslanden Doctors' Summit	n/a	Hosted second Mediclinic Middle East Annual Research Day		
MEDICATION SAFETY, IMPL	ANTS AND DISPOSABLES, A	ND DIAGNOSTICS			
Refined and optimised the medication management process	Commenced with specialist group meetings for cardiology and orthopaedics in order to standardise implants and disposables	Developed additional action plans to improve medication safety	 Improved the utilisation of generic medication Investigated robotic pharmacy system Continued the centralisation and consolidation strategy for laboratories 		
NURSING AND MEDICAL PR	RACTITIONERS				
Enhanced collaboration on nursing	Developed a model to validate doctors' performance	Improved nursing skills mix and repositioned Nursing Unit Managers to improve clinical outcomes	Continued implementation of standardised appraisal process for medical practitioners and commenced roll-out for nursing staff		
PATIENT SAFETY					
Patient safety workshop in October 2019 attended by 130 leaders across the Group	Continued roll-out of patient-related outcome measurement Completed Patient Safety Policy compliance audit	Hosted three multidisciplinary patient safety workshops across the division	Completed Agency for Healthcare Research and Quality Hospital Survey on patient safety culture		
			EDICLINIC INTERNATIONAL DIC 01		



> HIRSLANDEN DOCTORS' SUMMIT 2019

As part of the commitment to professional development, Hirslanden organises an annual congress for its medical practitioners. This year the focus fell on the partnership between doctors and hospitals.

The annual Hirslanden Doctors' Summit took place on 29 November 2019 and was attended by around 300 of Hirslanden's medical practitioners. The event looked at the role doctors play in the evolving healthcare environment and gave insight into the Group's newly formulated strategy.

The 2019 programme was multifaceted, addressing topics from current developments in Swiss health policy to the revolutionary role of quantum computing in healthcare. Dr Jack Silversin, an experienced consultant from the United States, discussed the importance of a common vision for doctors and hospitals in his keynote address. He emphasised the fundamental importance of a functioning relationship between doctors and hospital management and provided insights into how this relationship can be improved.

Among the highlights of the event were the presentations on the Group's strategy by Dr Ronnie van der Merwe, Group Chief Executive Officer of Mediclinic, and Dr Daniel Liedtke, Chief Executive Officer of Hirslanden. While Dr Van der Merwe reported on the new Group strategy, Dr Liedtke elucidated the new Hirslanden strategy, 'Together We Care', derived from the strategy of the parent company. Both underscored the importance of a close relationship with doctors to Mediclinic and Hirslanden's future success - a fact that was brought home once again in Dr Silversin's presentation.

At the Hirslanden Doctors' Summit, particular attention is paid to networking: during lunch and breaks, doctors had the opportunity to exchange ideas with colleagues from other Hirslanden hospitals and departments, thus gathering valuable input.

During the 2019 event, the general public could get an insight into the key issues through live tweets and Instagram stories posted throughout the day. Several speaker interviews were uploaded to Hirslanden's YouTube account.

Another highlight of the Hirslanden Doctors' Summit was the presentation of a cheque to the aid organisation, Mercy Ships. Rather than giving doctors a token for their participation in the summit, Hirslanden decided to widen the impact by donating those funds to Mercy Ships instead.

Read more about Hirslanden's partnership with Mercy Ships in the 2020 Sustainable Development Report.

BETTER WAYS TO CONNECT

The wellbeing of the Group's clients forms the foundation of the business with Mediclinic's core purpose being to enhance the quality of life.

What matters most to these stakeholders is the delivery of quality, safe and cost-effective healthcare by means of world-class facilities and technology while ensuring the best possible client experience and protecting personal data.



HOW MEDICLINIC ENGAGES

- Press Ganey® patient experience index surveys
- Public publishing of clinical performance results
- Systematic patient rounds during hospital stay
- 24-hour helplines
- Health awareness days
- Brochures and magazines
- Websites and blogs offering health-related information
- Social media
- Client alliance programmes

MEDICLINIC'S RESPONSE

- The client is entrenched in three of Mediclinic's organisational values: being client centred, trusting and respectful, and patient safety focused.
- Continuous feedback is encouraged by way of patient experience surveys administered by Press Ganey®.
- Putting Patients First remains a key strategic objective for the Group. Mediclinic continues to invest in its people, clinical facilities and technology.
- Patient experience programmes focus on improved caregiver empathy and communication, intentional rounding, food service processes that enhance patient experience and safety, and effective management of complaints.
- Public-facing awareness and education campaigns run throughout the year.



I carefully considered the nature of the relationship between Mediclinic and those who make use of our services within an evolving healthcare landscape. A patient is a person receiving medical care; a client is a person who receives advice. The latter implies a level of trust and a long-term relationship that extends beyond mere treatment. We want our patients to interact with Mediclinic beyond the conventional treatment process, rather as a client who turns to us to enhance their quality of life.

Dr Ronnie van der Merwe, Group Chief Executive Officer

PATIENT EXPERIENCE

PRESS GANEY®

Mediclinic benchmarks and publicly reports on patient experience on a divisional level through Press Ganey®, an internationally recognised leading provider of patient experience measurement for healthcare organisations across the continuum of care. Patients are surveyed after discharge and this valuable feedback helps Mediclinic better understand patients' needs and adapt care services accordingly (Table 1).

The patient experience survey collects feedback on the following categories:

- · Admissions process
- Condition of room
- Meals
- Nurses
- Physicians
- Tests and treatments
- Experience of visitors
- Personal issues (i.e. privacy, safety, hygiene, respect)
- Discharge process
- Overall experience



Table 1: Press Ganey® results for the 2019 calendar year

		Hirslanden ¹	Mediclinic Southern Africa	Mediclinic Middle East ¹
Participating since		February 2017	October 2014	October 2014
Total participating facilities		17	50	6
Total surveys collected		12 191	52 958	2 939
Likelihood of recommending the hospital/clinic ²		92.1%	85.0%	88.6%
Mean score out of 100	Overall	88.3 (2019: 87.4)	82.7 (2019: 82.0)	86.0 (2019: 85.6)
	Admissions ³	92.5	85.7	86.4
	Nurses	89.7 (2019: 88.7)	82.3 (2019: 81.4)	88.9
	Physicians	91.4 (2019: 91.2)	86.6 (2019: 86.2)	88.8 (2019: 88.6)
	Tests and treatments ³	89.4	83.6	86.1
	Personal issues ³	88.1	80.3	86.2
	Discharge ³	86.5	81.9	82.7

Notes

68 000
PATIENT SURVEYS

SPOTLIGHT ON PATIENT SURVEYS

No fewer than 68 000 patient surveys were collected in 2019. A medical practice survey is currently conducted at Mediclinic Middle East outpatient clinics while ambulatory and emergency centre surveys will be added for all divisions in 2020. In addition, Hirslanden must comply with the survey of the Swiss National Association for Quality Development, ANQ.

¹ Caution must be exercised when interpreting the 2019 patient experience results for Hirslanden and Mediclinic Middle East. No feedback was collected for Hirslanden by Press Ganey® for several months and the Al Ain region in Mediclinic Middle East had a low response rate.

 $^{^{\}rm 2}\,\mbox{lncomparable}$ with prior year data due to new measurement categories.

 $^{^{\}mbox{\tiny 3}}\,\mbox{No}$ prior year data stated as this is a new disclosure.

CURRENT INITIATIVES

The various initiatives listed below are in line with the Press Ganey® priority index per division, and as such are not comparable across the Group.

DIVISIONAL INITIATIVES

HIRSLANDEN

- Relaunch of working group on discharge management planned for March 2020
- · Discharge checklist introduced
- Interruption in service resulted in no feedback collected for several months
- Service challenge rectified by selecting and appointing new fieldwork provider

MEDICLINIC SOUTHERN AFRICA

- Nursing Odyssey project to improve nursing quality moving into next phase after extensive work done on the empowerment of nurses who run the units (Unit Managers)
- Rolling out an enhanced prescription booklet which encompasses more content and retains both normal and antimicrobial charts
- Recording of pharmacy interventions and shared learnings of potential errors prevented
- Enhancing medicine labels to improve information on medicines available to the patient
- Value-based care provision within the following focus areas: medication safety & AMS, safe surgery, safe critical care, safe mother & baby care, safe emergency care
- Embedment of initiatives on Patient Safety and Quality Improvement skills
- IPC principle embedment

MEDICLINIC MIDDLE EAST

- Dedicated doctor engagement sessions in Abu Dhabi with Al Ain scheduled for February 2020
- · Centralised contact centre
- Hourly rounding policy for Mediclinic City Hospital
- Improvement of discharge process at Mediclinic City Hospital
- Focus on registration process at Mediclinic Ibn Battuta
- Quarterly meetings between clinical, operational and marketing teams
- In-person input from Press Ganey® patient experience advisor

STREAMLINING EMERGENCY ADMISSIONS

At Mediclinic City Hospital in the UAE, a technological solution has not only made emergency admissions more efficient, but also lowered risks associated with the process.

In hospitals around the world, the sight of patients completing admission forms is a familiar one - even in emergency departments, where time is of the essence. Up until the first quarter of 2019, patient registrations in the Emergency Department of Mediclinic City Hospital were also done manually. Patient administrators would type in the information collected on admission forms, but this came with various risks. The manual encoding caused bottlenecks and exposed the hospital to identification errors.

In late April 2019 the hospital launched a project to use card

readers for automatic patient registration in the Emergency Department. This works by inserting the patient's Emirates ID in the card reader, which then captures the person's information and copies it to the Health Information System.

To mitigate any potential risks associated with the new admission system, Mediclinic City Hospital proactively implemented a failure modes and effects analysis. The aim was to identify where and how the process might fail and assess the relative impact of various failures. Over the course of three months, Operations Manager Virginia Chapman led the project, under the sponsorship of Medical Director

Dr Rolf Hartung and Head of Emergency Department Dr Jacques Malan.

After a rigorous process redesign and by formulating action plans to mitigate identified risks, a dramatic improvement from the original manual process was implemented.

No identification error had occured four months into the new card reader system. The new process furthermore made employees more efficient and streamlined the emergency admission process.

It's one of several initiatives at Mediclinic Middle East which put patient safety and satisfaction first.

> INTENTIONAL ROUNDING

Through regular, structured patient checks, Mediclinic Southern Africa is improving patients' experience of care.

There is no denying that being in hospital is stressful. Even more so when you feel unsure about aspects of the treatment and your confinement to bed keeps you out of the loop. Nurses have a crucial role to play in keeping patients informed, ensuring their safety and comfort, and enhancing their overall experience. To make the most of these opportunities, Mediclinic Southern Africa has placed a focus on intentional rounding over the past year.

The practice was recommended by Press Ganey®, the independent provider of Mediclinic's patient experience surveys, to improve patient satisfaction. Where patients felt they were not kept adequately informed or included in treatment decisions, intentional rounding would involve them and ensure regular touch points.

'What intentional rounding isn't, is merely the implementation of hourly rounds,' clarifies Yolanda Walsh, Nursing Odyssey Programme Manager. Within Mediclinic, intentional rounding is defined as a meaningful interaction. For the patient, it should feel as if nurses are anticipating their individual needs and that they have insight into their treatment.

By making use of a structured routine, intentional rounding aims to deliver essential nursing care reliably and proactively. The reported benefits of the practice are myriad: results published in the *American Journal of Nursing*¹ show intentional rounding reduces patient falls by 52%, decreases nurse calls by 37% and increases patient satisfaction by 12%.

Intentional rounding typically involves set phrases and scheduled tasks, as well as asking about the four Ps: Positioning, Personal needs, Pain and Placement. However, in Mediclinic Southern Africa, the approach was to optimise the various patient rounds in the existing ward routines, making sure every interaction was meaningful.

One such patient round is the clinical bedside handover, where the current nursing shift informs the next shift of the patient's specific care needs. By doing this in the presence of the client, nurses can ensure the patient is kept informed.

For the implementation of intentional rounding at Mediclinic Southern Africa, Walsh and Nursing Operations Manager Louise Aylward studied international guidelines, pored over evidence-based articles and analysed best practices within the division. The result was a thorough implementation guide with structured steps so individual hospitals could measure, analyse and tailor their implementation. In January 2019, the project got underway in all of the division's hospitals.

A year into its implementation and there is evidence of intentional rounding's positive impact at Mediclinic Southern Africa. Feedback from 2019 patient experience surveys show improvements in two key indicators: the perceived skill of nurses and whether they kept patients informed. For the former, the median of 82.4% increased to 83.4%; for the latter it increased from 77.6% to 78.4%. Walsh notes that in both cases the improvement was statistically significant and accompanied by reduced variance.

As part of Mediclinic's *Patients First* commitment, the project is making a real difference to how patients experience care.

Figure 1: Effect of intentional rounding on patient experience Nurses kept you informed



Response to Press Ganey® patient experience survey

Median

Note

Meade, Christine et al. 'Effect of Nursing Rounds on Patients' Call Light Use, Satisfaction, and Safety'.

*American Journal of Nursing (September 2006).



PATIENT EXPERIENCE CONTINUED

SAFETY TOP OF MIND

Patient safety campaigns within the Group ensure that employees keep clients at the heart of all Mediclinic does.



FLU JABS FOR EMPLOYEES

Vaccination enables employees to protect those they encounter, making the annual flu vaccine an integral measure in patient safety. This is a universal focus area across the Group and internal campaigns are aimed at increasing the employee participation rate. At Hirslanden, the annual campaign was expanded to include an expert talk, employee video statements and an award for the clinic with the highest uptake. The result? Division-wide the vaccination rate increased by almost 8% from 18.6% to 26.3%. The increase year-on-year is encouraging, with more activities planned to boost the overall rate considerably in the medium term.



WHERE CLEAN HANDS

With 5 May declared Global Hand Hygiene Day by the World Health Organization ('WHO'), Hirslanden marked the day with several initiatives: an explainer video, information stand, hand cream and even cookies. Employees were challenged to submit videos on the topic of keeping hands clean.



EXPLORING THE 'ROOM OF HORRORS'

Not a fairground attraction, but just as terrifying as any haunted house: in the 'Room of Horrors' clinical employees must identify threats to patient safety in a specially arranged hospital room. This interactive campaign by the Swiss Patient Safety Foundation ran from 16-20 September 2019 in seven Hirslanden facilities. Hirslanden employees were so alert to potential hazards, they even picked up some risks not identified by the campaign organisers.



A BETTER DINING EXPERIENCE

Because nutrition is such an important aspect of health and recovery, Mediclinic Southern Africa set out to optimise the experience. Meal times were changed to match home routine more closely and patients can now choose between full, healthy and light meals. Separate menus were introduced for paediatric, rehabilitation and longstay patients and extra snacks for breastfeeding mothers. To improve nutrition, a diet nurse is allocated to every unit, ensuring that patients receive the correct meals. Incorrect serving poses a risk to patient safety; for example, a meal with known allergens or food before a procedure. Nurses also monitor intake and assist patients to eat. Following the project implementation, the Press Ganey® patient experience surveys recorded improved scores for meals.



Did you know?

The flu vaccine prevents influenza in

of healthy adults.

PATIENTS FIRST

HOW MEDICLINIC PUT PATIENTS FIRST IN 2019

Patient safety workshop Indicators for clinical held for leadership across performance expanded the Group Surgical safety checklist More day case clinics rolled out in all facilities health technology CPCs for all three assessments divisions ('HTAs') conducted Public website with Survey of patient hospital-specific clinical experience streamlined performance indicators for to increase participation Mediclinic Southern Africa

FOCUS ON PATIENT SAFETY

Held as part of the Mediclinic Group Conference in October 2019, a patient safety workshop was attended by 130 senior managers from the three divisions. Furthermore, Mediclinic Middle East conducted a survey on safety culture by the Agency for Healthcare Research and Quality; the survey is planned for 2020 in the other two divisions, in conjunction with the introduction of a safety pledge. Extensive training has been done on the criteria for never events to standardise reporting between divisions.

GREATER CONVENIENCE

All three divisions have day case clinics to meet client needs: Hirslanden has two¹. Mediclinic Southern Africa has six, with a further four operated by Intercare, and Mediclinic Middle East two.

EXCELLENCE IN CANCER CARE

At Hirslanden and Mediclinic Middle East, Comprehensive Cancer Centres deliver world-class cancer care. At Hirslanden, the designated

tumour boards for breast and prostate cancer were joined by multidisciplinary medical boards in oncology, urology and lung cancer at the hospitals in Aarau, Bern and Biel. The Hirslanden breast cancer centres collaborated with University Basel and the Swiss Group for Clinical Cancer Research. An information technology tool for benchmarking clinical outcomes between the centres is in development.

A PIPELINE FOR NURSING TALENT

Two Mediclinic Southern Africa learning centres have been accredited to present the three-year Diploma in Nursing. The division signed an agreement with the South African Nursing Council to conduct their exams in India. which will facilitate the recruitment of nurses.

OPPORTUNITIES

- Implementing standardised measures for clinical performance in outpatient clinics
- Developing performance indicators for ambulatory surgery units

Press Ganey® inpatient experience index grand mean score out of 100



Hirslanden



Mediclinic **Southern Africa**



Mediclinic Middle East

Note

¹ At 1 April 2020, Hirslanden's day case clinics increased to three with the acquisition of Operationszentrum Zumikon.



MEDICLINIC CITY HOSPITAL

BETTER WAYS TO UNLOCK VALUE

MORE VALUE FOR CLIENTS

Across the divisions, projects focus on improving the quality of care, reducing costs for patients and providing innovative services.

HIRSLANDEN

EXPANDING ACROSS THE CONTINUUM OF CARE

Swiss clients can look forward to an integrated healthcare ecosystem thanks to a collaboration between Hirslanden and Medbase. Already the biggest provider of primary care with more than 50 medical care centres in Switzerland, Medbase has its sights on reaching 200 centres. The collaboration envisions an interdisciplinary, cross-sector network that will look after every aspect of the healthcare journey, from prevention and primary care to outpatient procedures and specialised surgery.

GROWING THE ROLE OF NURSES

In cooperation with the Bern University of Applied Sciences, Hirslanden is providing internships for students of the master's degree for Nurse Practitioner. For the pilot programme, physicians at three Hirslanden facilities will act as supervisors. In support of the Swiss strategy to transform healthcare models, the qualification enables nurses to support and supplement doctors by performing basic clinical examinations and making simple clinical diagnoses.

THE RIGHT CARE AT THE RIGHT LEVEL

Within Hirslanden, a pilot investigation evaluated the frequency of various procedures according to insurance class to evaluate possible medical over-servicing. Based on a Klinik Hirslanden model, services are allocated to different levels of insurance class according to outcomes. Treatment must be effective, appropriate and efficient to qualify as standard medicine. The investigation found no over-servicing.

BREAST CANCER CENTRES FORM NETWORK

Hirslanden breast cancer centres are collaborating with the University of Basel and the Swiss Group for Clinical Cancer Research to form a study network. Activities within the network include the development of a digital tool for benchmarking clinical outcomes between the Hirslanden breast cancer centres

ONWARDS WITH ONCOLOGY

Besides the designated tumour boards for breast and prostate cancer, other multidisciplinary medical boards (lung, urology, oncology) were successfully implemented at the hospitals in Aarau, Bern and Biel. This is to ensure treatment quality and adherence to international medical guidelines and national regulations.

MEDICLINIC SOUTHERN AFRICA

A JOURNEY TO BETTER NURSING

Through the Nursing Odyssey project, Mediclinic Southern Africa embarked on a quest to address issues that impact the quality of nursing. The initiative focused on intentional rounding (see page 26), timely recognition and rescue of deteriorating patients, and empowering unit managers. Phase 1 of the Nursing Odyssey has already shown improvements in patient experience metrics.

CLEARING THE WAY FOR STROKE TREATMENT

With stroke training days conducted at 49 Mediclinic Southern Africa hospitals, a standardised clinical pathway has been set in place for dealing with this medical emergency. Closer collaboration within clinical teams at and between hospitals is evidenced by success stories of improved patient care. In 2020, a stroke database will be developed.

SHARING CLINICAL PERFORMANCE WITH THE PUBLIC

In a move to empower patients and drive improvement, Mediclinic Southern Africa on 25 November 2019 launched a public website that reports patient safety indicators. Clients can select any hospital in the division to view the incidence of falls, medication errors, near misses and pressure ulcers as well as the extended length of stay index. By June 2020, 3 051 users had made use of the site.

FOCUS ON MOTHER AND BABY

To improve obstetrics outcomes, Mediclinic Southern Africa implemented a range of initiatives. These include clinical guidelines published on the Doctors' Portal, collaborative performance reports for hospitals and obstetricians, morbidity and mortality meetings, and Mediclinic midwifery skills enhancement training. Intellispace online foetal heart rate monitors were implemented in 23 obstetric units and head-cooling equipment in 20 neonatal critical care units ('CCUs').

MORE PATIENTS CHOSE CARE EXPERT

Care Expert is an innovative, integrated hip and knee arthroplasty product co-developed by Mediclinic Southern Africa and its associated orthopaedic surgeons. The product optimises the efficiency, effectiveness and quality of treatment and is based on value of care, rather than fee-for-service. In 2019, Mediclinic Southern Africa facilities completed 2 453 Care Expert cases, an increase of 46% on the previous year. This means nearly 41% of all hip and knee arthroplasties were Care Expert procedures. Effective pain management and information sharing with clinicians resulted in a more efficient care process.

MEDICLINIC MIDDLE EAST

GENOME SEQUENCING FOR PRECISE TREATMENT

Mediclinic Middle East is at the forefront of healthcare with the use of genetics for personalised medicine. To enable the opening of the UAE's first precision medicine lab in 2020, the division has added a genetics service and acquired equipment for genome sequencing. Further preparations include registration with the Ministry of Health, appointment of two molecular geneticists and finalisation of the test menu.

FERTILITY CENTRE FOR ABU DHABI

The construction of an *in vitro* fertilisation ('**IVF**') centre at Mediclinic Al Bateen has been completed. Bourn Hall International MENA Ltd, subsidiary of the IVF pioneers Bourn Hall, is in the process of obtaining Department of Health clearance for the centre.

THE PURSUIT OF EXCELLENCE

To facilitate the establishment of CoE, Mediclinic Middle East has created a framework of requirements. Hospital Directors presented their initiatives for the foundation of CoE, clinical programmes and specialised units. These include a Comprehensive Cancer Centre, Breast Centre, Neuro Centre and Cardiovascular Centre, with various facilities working together in a hub-and-spoke model. A further five centres have project status and are working towards accreditation. Offering clients the very best care are the specialised units for Robotic Surgery, Endometriosis and Bariatrics as well as the Diabetes Programme.

COMMITTED TO EDUCATION

Academic affiliations exist between Mediclinic Middle East and Mohammed Bin Rashid University of Medicine and Health Sciences ('MBRU') for the training of medical students. A four-year postgraduate paediatric residency programme is run with AI Jalila Children's Hospital and a memorandum of understanding has been signed for a range of subjects. The division also places students from the Higher Colleges of Technology, AI Ain University and Fatima College of Health Sciences.

REASON TO SMILE

Mediclinic Middle East has appointed a director for dental services to implement strategy, oversight and support, as well as advise on new technology. The division aims to introduce oral scanners in busy practices for quicker turnaround times in preparing crowns. Standardisation of dental consumables across the division will create significant efficiencies and cost savings.

BETTER WAYS TO CARE

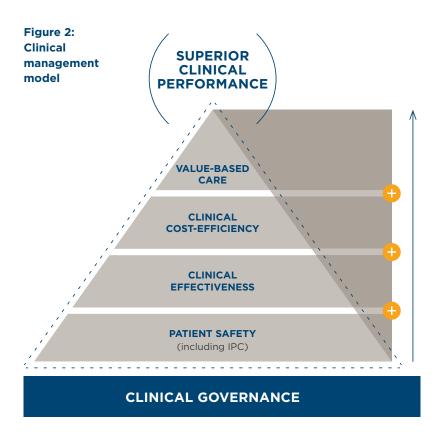
CLINICAL PERFORMANCE

Mediclinic's purpose is to enhance the quality of life. To achieve that, superior clinical performance is essential. Clinical governance lays the foundation for the structures and processes that ensure the best possible outcomes for patients.

CLINICAL PERFORMANCE FRAMEWORK: FOLLOWING THE CLINICAL MANAGEMENT MODEL

Mediclinic uses a simple, yet powerful clinical performance framework built on a sound clinical governance foundation – collectively, the clinical management model (Figure 2).

The model supports a structured approach to clinical management through a clinical governance foundation layer that provides the structures and processes required for clinical performance.



WARD-TO-BOARD ACCOUNTABILITY: STRENGTHENING THE ACCOUNTABILITY FRAMEWORK

To improve efficiency and enable seamless integration of information flow, Mediclinic pursues Ward-to-Board accountability. To this end, the Clinical Performance and Sustainability Committee has been replicated at divisional and hospital level. Aligning the committees and reviewing divisional differences provide valuable information on organisational accountability pathways and structure. In addition, clinical services and governance committees where possible call on independent experts to act as 'positive dissenters'. Divisional CPCs were established for three divisions during the year.



Clinical services and governance committees where possible call on independent experts to act as 'positive dissenters'.

Table 2: Divisional CPC summary

	Hirslanden	Mediclinic Southern Africa	Mediclinic Middle East
Meetings held	1	4	3
Summary	Quality boards established at each facility	Subcommittees active at 38 hospitals	Hospitals and clinics divided into clusters – each cluster has a clinical quality and patient safety committee which meets regularly

HTAS: IDENTIFYING THE BEST-VALUE TECHNOLOGY

To ensure capital is allocated strategically and investments in equipment and interventions are sound, the Group makes use of HTAs. These measure clinical and cost effectiveness and the broader impact of healthcare treatment and tests on those who plan, provide or receive care. Research focuses on evidence of a technology's effectiveness by comparing it to the current standard intervention.

Having established a competency in HTAs, the Company is in the process of looking to strengthen the function so that in time it becomes a core, centrally shared service which will enable better clinical decision-making and aid clinical standardisation.

EHRS: STREAMLINING PATIENT DATA

EHRs not only transform both clinical and business processes, these also:

- improve quality, safety and efficiency;
- reduce health disparities;
- improve care coordination;
- · enable client engagement;
- improve population and public health:
- protect privacy and personal health information:
- enable expansion into previously untapped markets by laying the foundation for artificial intelligence-enhanced diagnostics, telemedicine and remote-sensing, thereby future-proofing the organisation.

Establishing a comprehensive digital backbone is a priority across all the divisions, in line with the Group's strategic goal to transform its healthcare services and client engagement through digitalisation (goal 3).

At Hirslanden, an EHR and PDMS are

being implemented, as well as a radiology information system. These projects form part of HIT2020, a larger back-office centralisation project at this division.

Mediclinic Southern Africa has appointed a taskforce which will evaluate and manage the process of selecting and implementing an EHR solution that will suit the local operating and fiscal environment.

Mediclinic Middle East commenced with the roll-out of its EHR at Mediclinic Parkview cluster clinics, Mediclinic Khalifa city clinic and Mediclinic Al Noor Hospital during the year, with Mediclinic Airport Road planned for 2020. The roll-out schedule was impacted by introduction of the Department of Health Abu Dhabi's new HIE project. The EHR was successfully integrated with the HIE in Abu Dhabi, making Mediclinic Middle East the first private provider to achieve this.



EXCHANGE AND RECORD

The integration of Mediclinic's EHR with the UAE government's HIE enables physicians to review patient medications, allergies, laboratory tests and radiology reports across both systems. Mediclinic Middle East is also represented on the clinical advisory and technical committees of the HIE project.

CLINICAL PERFORMANCE CONTINUED

WHO IS DOING THE RESEARCH AT MEDICLINIC MIDDLE EAST?



- 38% MBRU student research
- 34% investigator-initiated
- 19% pharmaceutical industry sponsored
- 6% grants
- 3% consortium studies

RESEARCH DAY



ebruary 2019



CPD



19
presentations



45
posters



221 attendees

RESEARCH: GAINING GREATER MEDICAL INSIGHT

Research is conducted across the divisions, making Mediclinic an attractive partner for multinational, multisite studies. During the year, divisional and Group research committees were established which will monitor the ongoing research in each division.

HIRSLANDEN

27

approved medical research studies

MEDICLINIC SOUTHERN AFRICA

31

approved medical research studies

MEDICLINIC MIDDLE EAST

68

approved medical research studies

SETTING THE STANDARD FOR THE UAE

Recognised with the Best Researcher Award at the 2019 Research Day, Dr Shaheenah Dawood, senior oncologist at Mediclinic City Hospital, gives insight into her work.

What does your research project involve?

I'm looking at the use of immunotherapy (pemrolizumab and tamoxifen) in the treatment of hormone receptor positive breast cancer. This is the first investigator-initiated phase II clinical trial in the UAE to do so. Immunotherapy has largely been focused on more immunogenic malignancies such as lung cancer and patients with triple negative breast cancer. If the results of this two-year study are positive, it could open up a larger cohort of patients with breast cancer who could benefit from immunotherapy.

What makes Mediclinic City Hospital a good facility for this research?

The hospital has grown to be a comprehensive oncology CoE in the region, attracting both national and international patients. This also involved developing a dedicated clinical trials programme to enhance academic credibility, enable international collaborations and facilitate access to novel agents.

At Mediclinic City Hospital, we have all the standard operating procedures in place, we actively collaborate with the medical school and, most importantly, we have the support of the whole Mediclinic to ensure that we strive for academic brilliance and ultimately help the patients in our community.

What is the study's significance for the clinical research community in the UAE?

In the past we have shied away from doing phase II clinical trials and have focused more on phase III and IV trials. This study will allow us to gain more experience in this realm. Furthermore, the trial has a huge translational component that will allow us to look at unique signatures to better define cohorts that will benefit from therapy. I believe this trial will set the example of how we conduct future investigator-initiated trials in the UAE. It is an opportunity to leave a lasting footprint in the oncology community.

CLINICAL OUTCOMES

CLINICAL INDICATORS

Each aspect of the clinical performance framework – patient safety, clinical effectiveness, clinical cost efficiency and value-based care – builds on the previous one.

More than 75 clinical indicators are measured monthly in line with a standardised set of definitions and classifications. Many of these outcome indicators are self-reported and others are derived from administrative data. These indicators are monitored for trends and used to identify opportunities for improvement. The hospitals closely monitor their results and compare themselves with other hospitals in the same division.

Clinical indicator improvements during the year include the roll-out of the SIR model for SSIs; the refinement of existing indicator definitions; and the expansion of categories.

The scope of services and delivery model of each division differ significantly. Note the following when reviewing the clinical performance results reported on pages 37-49:

- all indicators are reported for the calendar year to ensure complete and comparable results;
- figures in the 2020 Clinical Services
 Report may differ from the previous
 report where additional data
 became available after publication
 or where criteria changed (refer to
 page 36);
- for comparative purposes, the case mix indices of the divisions were calculated by using the internally developed CCRG system (refer to page 36);
- statistical significance is determined for a subset of the indicators and calculated by determining whether there is a statistical difference when values from prior periods are compared (refer to page 36); and
- not all indicators are directly comparable due to regulatory requirements, e.g. Simplified Acute Physiological Score ('SAPS') II is measured at Hirslanden while SAPS 3 is measured at Mediclinic Southern Africa and Mediclinic Middle East.

BENCHMARKING

Benchmarking is used to measure performance over time. Facilities and divisions are benchmarked against each other where sufficient information is available to control for those variables facilities do not have control over, such as the mix of patients and/or differences in regulatory requirements. Otherwise, facility performance is benchmarked over time. As access to clinical data from the divisions improves, more benchmarking will be possible with risk adjustment.

Where available, external benchmarking is used. This will be expanded over time.

Table 3: Comparable benchmarks of international clinical quality

Indicator	Hirslanden	Mediclinic Southern Africa	Mediclinic Middle East
Vermont Oxford Network ('VON')	n/a	•	•
SAPS II	•	n/a	n/a
SAPS 3	n/a	•	•
The Initiative on Quality Medicine ('IQM')	•	n/a	n/a
Catheter-associated urinary tract infections ('CAUTI'), central line-associated blood stream infections ('CLABSI') and ventilator-associated pneumonia ('VAP'), as per Centres for Disease Control and Prevention definitions	Selected patient groups only	•	•

DISCREPANCIES

The 'Clinical outcomes' section that follows, provides a summary of the events that have occurred in the divisions during the year. As the effect of actions become prevalent over time, so too the data changes resulting in indicators which fluctuate slightly after the reporting period. These changes can be contributed to one or more of the following reasons:

- reclassification of an event after investigation;
- · delay in receiving infection test results (e.g. microbiology culture results);
- delay in capturing of data;
- · delay in billing days and patient counts;
- finalisation of accounts (e.g. accounts for complex cases); and/or
- · discharge of patients to palliative care facilities.

KEY TERMS



Case mix

Case mix refers to the characteristics of patients

served, where some have more complex medical conditions which may influence outcomes. Healthcare providers have no control over these characteristics and therefore the need exists to keep them fixed in comparative analysis. The ability to measure the heterogeneous case mix of hospitals has been recognised for some time as critical to improving hospitals and health system management through planning and quality assurance, as well as achieving equity in hospital reimbursement. Without the capability to measure case mix differences, the comparative analysis of hospital outcomes and attempts to establish the reasonableness of those outcomes often reflects in oversimplification of the issues involved and may result in invalid and misleading findings.



Clinical and cost-related groupings

The CCRG is a classification system of the type of illness and clinical severity in a hierarchical system of clinical and statistical homogenous groups used to assign a risk score to each patient. A higher score reflects higher complexity and case load. These risk scores in turn are used to group patients in risk stratums to enable risk-adjusted benchmarking.



IPC bundles

IPC bundles are groups of evidence-based

practices which, when performed consistently, significantly improve patient outcomes and prevent device-related and procedure-related healthcare-associated infection ('HAI').



Statistical significance

Statistical significance is determined to identify

areas of improvement that create knowledge leveraging and sharing opportunities to the benefit of all divisions. By also identifying areas of concern, it allows the Group to determine key focus areas for future initiatives

Statistical significance is determined by performing a hypothesis test. A difference is deemed to be statistically significant if the p-value exceeds a 5% critical limit. The indicators reported represent the means of their respective distributions and the hypothesis test examines if the means for successive years are different from the same distribution (null hypothesis) or not (alternative hypothesis). This result allows Mediclinic to conclude if a change is significant or not. The test statistic for the hypothesis test and the distribution of the test statistic are dependent on the type of data being reported on.

Statistical significance

continued

Where variation in the current year's data is found to be statistically significant as compared to prior reporting periods, the applicable data in the graph is marked with an orange dot and an explanation is provided, if available (see example right). In these instances it is unlikely that the changes in the numbers are due to chance.

EXAMPLE OF STATISTICAL SIGNIFICANCE

Figure 3: Adverse events - Mediclinic Middle East

Rate per 1 000 patient days

Hospital-associated pressure ulcers

Statistically significant



Falls



Medication errors



PATIENT SAFETY

Achieving patient safety requires a collective commitment to building a patient safety culture. This means that each employee focuses on reporting and learning from near misses and adverse events that may cause patient harm. An open culture where teams are comfortable discussing patient safety incidents and concerns is fostered through the inclusive completion of systems analysis of SAEs in hospitals. These processes lead to an informed culture because teams learn from the adverse events to mitigate future incidents. Fundamental to this is the 'just culture' (Frankl framework) wherein employees involved in adverse events are treated fairly.

Never events

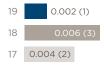
Across the divisions, the WHO surgical safety checklist is followed to decrease errors and adverse events, and increase teamwork and communication during surgery.

The implementation of the safe surgical checklist remains a key focus area, with good progress made across all divisions during the year. Mediclinic reports only on a subset of surgical and procedural never events at present, focusing on: the correct identification of patients, procedures and sites, and the prevention of retained foreign objects.

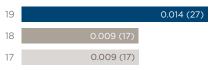
Figure 4: Never events¹

Rate per 1 000 patient days (Number of events in brackets)

Hirslanden



Mediclinic Southern Africa



Note

The measurement and reporting of never events have been refined during the year to ensure comparable rates across the Group. The never event rate is reported to the third decimal to negate the obscuring effect of rounding.

Mediclinic Middle East



CLINICAL OUTCOMES CONTINUED

Adverse events

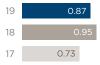
An important aspect of improving the quality and safety of patient care is preventing adverse events that could harm patients, including hospital-associated pressure ulcers, falls and medication errors.

HIRSLANDEN

Figure 5: Adverse eventsRate per 1 000 patient days

Statistically significant

Hospital-associated pressure ulcers



Falls



Medication errors

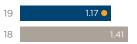
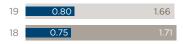


Figure 6: Falls breakdown

Rate per 1 000 patient days

■ Falls without Injury ■ Falls with Injury



The 8.42% decrease in the hospital-associated pressure ulcer rate from 0.95 in 2018 to 0.87 in 2019 is not statistically significant.

The fall rate remained stable at 2.46.

Hirslanden commenced reporting on medication errors in 2018. The 17.02% decrease in the medication error rate from 1.41 in 2018 to 1.17 in 2019 is statistically significant. Analysis of the fluctuation is difficult as the current reporting system is restrictive with limited classification and system factor analysis abilities.

MEDICLINIC SOUTHERN AFRICA

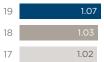
Figure 7: Adverse events Rate per 1 000 patient days

Statistically significant

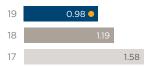
Hospital-associated pressure ulcers



Falls



Medication errors



The rate of hospital-associated pressure ulcers remained stable at 0.23.

The 3.88% increase in fall rate from 1.03 in 2018 to 1.07 in 2019 is not statistically significant. Preventing falls remains a key focus area and the Falls Policy was reviewed during the period and aligned to the Group policy.

Medication errors per 1 000 patient days reduced by 17.65% from 1.19 in 2018 to 0.98 in 2019, a statistically significant decrease, mainly due to a reduction in administration errors. The involvement of pharmacists in identifying incorrect medication error reporting has resulted in additional reporting mechanisms for potential medication errors. Near-miss medication errors related to prescription and dispensing are recorded to show where pharmacists intervene with regard to appropriate prescription of antibiotics and other medication, and where own dispensing errors are corrected before medication is given to the patient. Pharmacists are also well placed to identify certain administration errors which may not have been identified by the nursing employees in the wards. This reporting is supplementary to the hospital events management system and is quantitative, voluntary and dependent on time availability of pharmacists. The data collection to date has been used to guide hospitals to identify specific areas for quality improvement and prevention of medication errors, and to provide a measurement tool to track progress.

MEDICLINIC MIDDLE EAST

Figure 8: Adverse eventsRate per 1 000 patient days

Statistically significant

Hospital-associated pressure ulcers



Falls



Medication errors



The increase in the hospital-associated pressure ulcer rate by 27.78% from 0.18 in 2018 to 0.23 in 2019 is not statistically significant. A pressure injury prevention project team was reactivated in response to the increase to address this across the entire division. Progress made against the listed standards and objectives as part of the prevention initiatives was measured and major compliance improvements were noted since August.

The 23.81% increase in the fall rate from 0.42 in 2018 to 0.52 in 2019 is not statistically significant, and is mainly due to patient and parent non-compliance to fall prevention instructions. Fall awareness and prevention remain a focus area for Mediclinic Middle East, with renewed emphasis on patient education and awareness of calling nurse assistance. The fall awareness campaign includes

educational videos for employees, fall prevention posters in patient rooms and creating a fall prevention booklet for patients and visitors. Training for clinical employees in the division continued.

The medication error rate decreased by 17.18% from 3.55 in 2018 to 2.94 in 2019, a statistically significant change. There is a continued focus on medication management. Both outpatient and inpatient medication errors are reported and are classified as prescription, dispensing and administration errors. Focused medication audits and physician education and training are ongoing in all facilities. Medication errors directly related to the newly implemented EHR in Mediclinic Parkview reduced significantly as the doctors, nurses and pharmacists adjusted to the system and important stock management issues were resolved.



Fall awareness and prevention remain a focus area for Mediclinic Middle East, with renewed emphasis on patient education and awareness of calling nurse assistance.

CLINICAL OUTCOMES CONTINUED

Infection prevention and control

Preventing infection is paramount to patient safety. Activities include standardising processes around infection control based on international best practices; implementing care bundles around the prevention of SSI, VAP, CLABSI and CAUTI; and running surveillance projects with multilayer methodology.

Each division has central IPC specialists who standardise infection control policies and procedures for the respective geography. Each facility has IPC team members who receive regular training and monitor compliance to the IPC bundles and any infections.

Hand hygiene

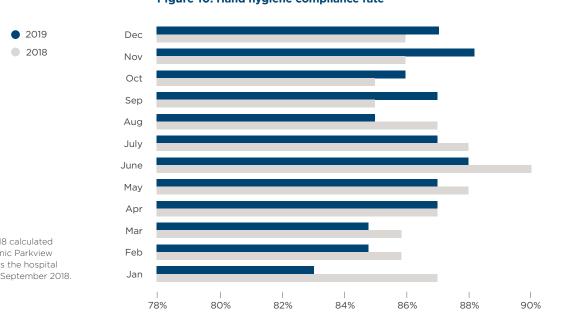
Hirslanden	Mediclinic Southern Africa	Mediclinic Middle East
Adherence to hand hygiene procedures is essential to prevent HAI and compliance is evaluated through direct observation by IPC specialists.	Hand hygiene compliance results showed a 4.96% improvement from 75.92% in 2018 to 79.68%. Hospitals continue to focus on interventions to improve hand hygiene compliance. There is a direct correlation between the improved hand hygiene compliance and the reduction in HAI rates.	Hand hygiene data is collected at all facilities using a standardised tool. Data is reported to Infection Control Committees of each cluster to address non-compliance.

MEDICLINIC SOUTHERN AFRICA

Figure 9: Hand hygiene compliance rate (%) vs HAI rate



Figure 10: Hand hygiene compliance rate¹



¹ Average for 2018 calculated without Mediclinic Parkview Hospital data, as the hospital only opened in September 2018.

Healthcare-associated infections

HIRSLANDEN

The HAI rate remained stable in 2019. As these conditions are rare, the calculated rates can be sensitive to single events.

MEDICLINIC SOUTHERN AFRICA

Figure 11: HAIs
Rate per 1 000 patient days

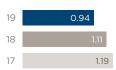


Southern Africa has a high burden of infectious diseases, unlike Switzerland and the UAE, necessitating a continued focus on the identification of infectious diseases and community-acquired infections upon admission and the prevention of HAI.

The 5.23% decrease in the HAI rate from 1.91 in 2018 to 1.81 in 2019 is not statistically significant and is mainly due to an increase in the hand hygiene compliance and continuous focus on device-associated infection control bundles. Hospitals continue to focus on interventions to improve compliance and on the five moments of hand hygiene as outlined by the WHO

MEDICLINIC MIDDLE EAST

Figure 12: HAIsRate per 1 000 patient days



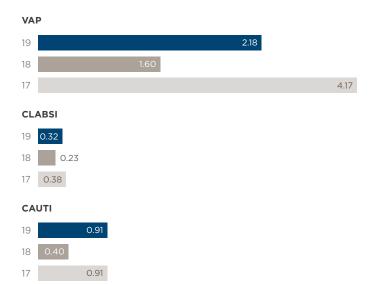
The 15.32% decrease in the HAI rate from 1.11 in 2018 to 0.94 in 2019 is not statistically significant. There is a continued focus on current IPC practices in the division, with a specific focus on the implementation of care bundles in the CCUs and compliance with antibiotic prophylaxis guidelines.

Device-associated infections

HIRSLANDEN

Figure 13: Device-associated infections

Rate per 1 000 device days



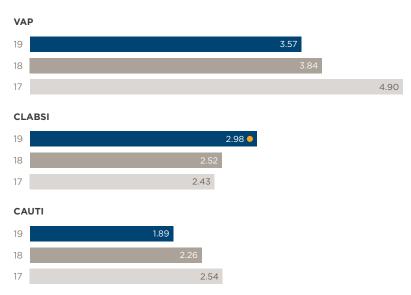
The rates of all device-associated infections increased during the period. The VAP rate increased by 36.25% from 1.60 in 2018 to 2.18 in 2019; the CLABSI rate increased by 39.13% from 0.23 in 2018 to 0.32 in 2019; and the CAUTI rate increased by 127.50% from 0.40 in 2018 to 0.91 in 2019. None of these increases are statistically significant. Behind the relative values there are seven incidences of VAP, four of CLABSI and 13 of CAUTI in different hospitals in the Hirslanden network.

MEDICLINIC SOUTHERN AFRICA

Figure 14: Device-associated infections

Rate per 1 000 device days

Statistically significant



The VAP and CAUTI rates decreased by 7.03% from 3.84 in 2018 to 3.57 in 2019 and by 16.37% from 2.26 in 2018 to 1.89 in 2019 respectively, mainly due to continued improvement of IPC bundle compliance. The 18.25% increase in the rate of CLABSI from 2.52 in 2018 to 2.98 is statistically significant. Each CLABSI case is analysed to understand the underlying contributing factors and to implement targeted interventions.

MEDICLINIC SOUTHERN AFRICA

Figure 15: SSIsRate per 1 000 theatre cases



The 4.49% decrease in the rate of SSIs from 2.67 in 2018 to 2.55 in 2019 is not statistically significant. The main contributing surgeries to the SSI rate are caesarean sections (14.61% increase) and abdominal hysterectomies. Specific patient factors impacting the SSI rate include obesity, non-conforming to hair removal requirements prior to surgery, age and co-morbidities such as diabetes mellitus.

MEDICLINIC MIDDLE EAST

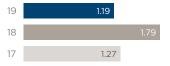
Figure 16: Device-associated infections

Rate per 1 000 device days

Statistically significant



CLABSI



CAUTI



The VAP and CLABSI rates decreased by 9.09% from 0.33 in 2018 to 0.30 in 2019 and by 33.52% from 1.79 in 2018 to 1.19 in 2019 respectively, mainly due to the reinforcement and strict adherence to care bundles in the intensive care units. Neither of these decreases is statistically significant. The rate of CAUTI increased by 185.29% from 0.34 in 2018 to 0.97 in 2019, a statistically significant change.

IPC care bundle practices were reinforced and staff competencies on catheter insertion added to the intensive care unit competencies. A taskforce was also identified to review the current audit process, compliance to the CAUTI bundles and validation of such cases.

Figure 17: SSIs
Rate per 1 000 theatre cases



The majority of the reported HAIs in Mediclinic Middle East are SSI cases. The 13.76% decrease in the SSI rate from 2.98 in 2018 to 2.57 in 2019 is not statistically significant. Surgical practices, theatre process flow, scrubbing processes, theatre attire, antibiotic prophylaxis and environment care were reviewed and addressed. The SSI cases after caesarean sections (elective and emergency) decreased significantly for the period under review after reinforcing antibiotic guidelines, monitoring compliance and standardising preoperative skin preparation and cleaning, as well educating patients on post-discharge wound management.

Antimicrobial stewardship

Antimicrobial resistance increases with growing utilisation of antimicrobials, therefore Mediclinic Southern Africa and Mediclinic Middle East monitor total antimicrobial utilisation in defined daily doses ('DDD').

HIRSLANDEN

The burden of resistant germs in Switzerland is low. Colonisation of patients with multidrug-resistant organisms is monitored on a monthly basis. Antibiotic consumption is reported to the Society of Pharmacists and benchmarked against other Swiss hospitals.

MEDICLINIC SOUTHERN AFRICA

Considering the high burden of infectious diseases in Southern Africa, effectively managing antimicrobial resources and preventing multidrug resistance are critical.

Figure 18: Antimicrobial utilisation indicators

DDD

Rate per 100 patient days



Undesired agents utilised for surgical prophylaxis

Percentage of undesired prophylaxis (%)



Prolonged treatment

Rate per 1000 exposures



The total antimicrobial usage decreased by 2.29% in 2019. The undesired surgical prophylaxis rate decreased by 8.00% from 3.50% in 2018 to 3.22% in 2019, due to improved use of the surgical prophylaxis guidelines. The 7.04% increase in the prolonged treatment exposure rate from 8.10 in 2018 to 8.67 in 2019 is not statistically significant. These indicators are based on administrative and billing data and are continuously updated and refined.

Improvement in the utilisation of antimicrobials is driven by retrospective audits and feedback interventions by the clinical and ward pharmacists in each hospital. Their interventions include discussions with the prescribing medical practitioner to improve appropriate dose, duration and frequency of antimicrobials, and to stop or change antimicrobials as soon as investigations demonstrate the causative organism's resistance profile.

MEDICLINIC MIDDLE EAST

Adult and paediatric antibiotic guidelines and the antibiotic stewardship programme were revised and implemented during the period. Compliance to the guidelines is continuously monitored.



At Mediclinic Southern Africa the total antimicrobial usage decreased by 2.29% in 2019.

CLINICAL EFFECTIVENESS

Clinical effectiveness measures whether the indication for the treatment was correct and whether the care was rendered timeously. The divisions participate in various international comparable outcomes databases, and also continuously measure and refine a set of internal indicators.

Mortality

HIRSLANDEN

Figure 19: Inpatient mortality rate (%) Percentage of admissions



The 1.04% decrease in the inpatient mortality rate from 0.96% in 2018 to 0.95% in 2019 is not statistically significant and remains in line with the 2017 and 2018 rates.

Adult critical care mortality - SAPS II

Hirslanden participates in the mandatory dataset for CCUs in Switzerland. SAPS II is a physiological mortality prediction model that utilises patient attributes to calculate an expected mortality value. The expected mortality rate is compared to the actual mortality rate calculating a mortality index.

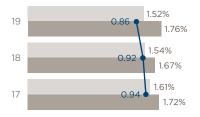
Table 4: SAPS II mortality index

	2017	2018	2019
Cases	7 805	7 364	6 707
Average age of patients (years)	68.0	68.0	68.3
SAPS II expected mortality rate (%)	8.00	13.44	13.42
Actual mortality rate (%)	2.50	2.81	2.65
SAPS II mortality index	0.31	0.21	0.20
Average length of stay in CCU (days)	2.0	2.2	2.2
Percentage of ventilated patients (%)	34.08	31.95	31.59

MEDICLINIC SOUTHERN AFRICA

Figure 20: Inpatient mortality

- Crude mortality rateExpected mortality rate
- Mortality index



The division's mortality index remained below one over the last 15 months, with a reduction of 6.52% year-on-year and an average rate of 0.86 in 2019. A new mortality systems analysis guideline will be implemented to help hospitals track and identify key contributing factors in order to identify opportunities for further quality improvement.

Adult critical care mortality - SAPS 3

Table 5: SAPS 3 mortality index

	2017	2018	2019
Cases	21 163	22 688	23 303
Average age of patients (years)	62.0	62.3	62.6
SAPS 3 expected mortalities (cases)	3 779	4 088	4 245
Actual mortalities (cases)	3 779	3 650	3 567
SAPS 3 expected mortality rate (%)	17.86	18.02	18.22
Actual mortality rate (%)	16.96	16.09	15.31
SAPS 3 mortality index	0.95	0.89	0.84
Average SAPS 3 score	51.06	50.77	51.04

The SAPS 3 mortality index decreased by 5.62% in 2019, mainly as a result of continuously monitoring the data integrity and ensuring the early identification of patients at risk of complications. Lessons learned are shared between units and hospitals on a regular basis, which drives continuous improvement. Improving clinical outcomes and nursing expertise in CCUs remain focus areas.

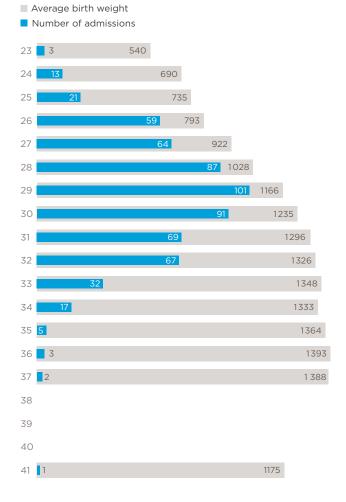
Neonatal mortality and Vermont Oxford Network

Mediclinic Southern Africa has contributed to the VON since 2001 and currently has 30 hospitals registered on the network. The VON is an international initiative aimed at improving the quality of care of infants through the collection and benchmarking of outcome data across the globe. There are currently over 1 300 participating centres around the world.

Although Mediclinic Southern Africa captures data on all infants admitted to participating neonatal CCUs, included in this Report are the very low birth weight ('VLBW') newborns, which include neonates who weigh 401–1500g at birth or fall into a gestational age range of 22–29 weeks. Most cases in 2019 were at 29 weeks' gestation and weighed more than 1 000g.

Figure 21: Average birth weight, gestational age and admissions for VLBW infants in 2019

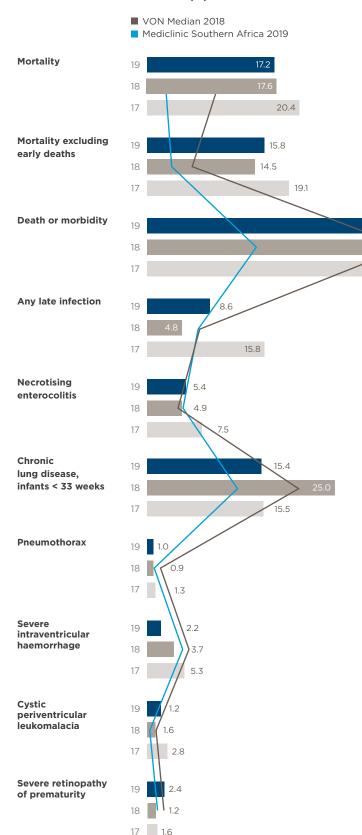
Given for gestational age in weeks





MEDICLINIC SOUTHERN AFRICA

Figure 22: Neonatal key performance measures (%)



There was improvement seen with regards to chronic lung disease, which results as a complication of ventilation in preterm infants.

34.6

36.7 41.7

An increase was seen in late infections which can be due, among many other influencing factors, to central line use and invasive ventilation. Increases were also seen in necrotising enterocolitis, which is a condition that typically occurs in the second to third week of life in premature infants, and is characterised by variable damage to the intestinal tract ranging from injury to the internal lining of the gut to perforation of the bowel. A neonatal central line care bundle has been compiled and implemented to address this.

Severe retinopathy of prematurity, a disease caused by abnormal development of retinal blood vessels in premature infants, is mainly caused by excessive oxygen use. All areas where small preterm babies are delivered or nursed now have oxygen blenders, and oxygen saturation targets are prescribed daily.

MEDICLINIC MIDDLE EAST

The mortality rate in the UAE is still low when compared to the other divisions due to the demographics and age profile of the patients. The overall acuity level of inpatient admissions and complexity of procedures are also much lower in the UAE compared to other divisions.

Figure 23: Inpatient mortality rate (%)Percentage of admissions



The 3.33% decrease in the mortality rate from 0.30% in 2018 to 0.29% in 2019 was not statistically significant. The majority of the mortalities occurred at the Comprehensive Cancer Centre at Mediclinic City Hospital where the higher acuity patients are treated. Legislative changes were also made to allow natural death in the UAE.

Adult critical care mortality - SAPS 3

Table 6: SAPS 3 mortality index

	2017	2018	2019
Cases	2 056	2 771	2 118
Average age of patients (years)	41.0	56.7	56.9
SAPS 3 expected mortalities (cases)	16	54	40
Number of mortality cases	46	51	37
SAPS 3 expected mortality rate (%)	0.77	0.91	1.9
Mortality rate (%)	2.24	1.8	1.7
SAPS 3 mortality index	2.90	0.95	0.93
Average SAPS 3 score	40.72	40.81	40.74

The SAPS 3 mortality index decreased by 2.11% in 2019, mainly as a result of continued and improved monitoring to identify high-risk cases, and early detection of complications to initiate the appropriate interventions and treatment.

Neonatal mortality and Vermont Oxford Network

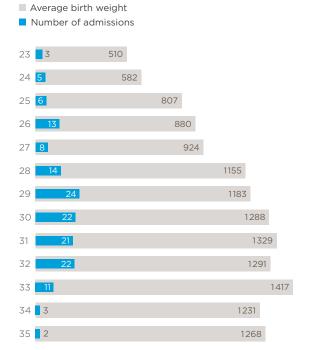
The VON database participation is well entrenched in the facilities. This is an important initiative to measure performance and improve the quality of care delivered to patients.

Although all infants admitted to neonatal CCUs are included in the programme, reporting focuses on all infants eligible for the VLBW database. When interpreting data, it must be considered that as the information is expressed as a percentage, a small sample size of VLBW can skew results when compared to the larger number of babies in the network database.

The division used data from the VON as a benchmarking tool for its neonatal units in 2019.

Figure 24: Average birth weight, gestational age and admissions for VLBW infants 2017-2019

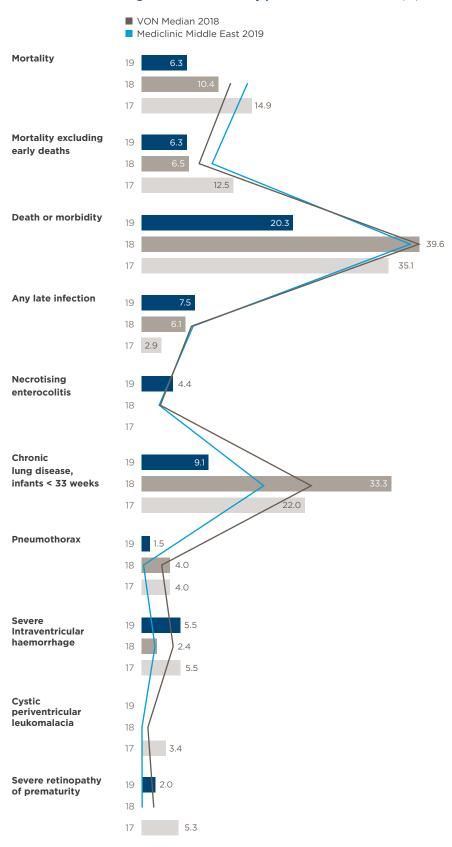
Given for gestational age in weeks



The number of VLBW cases admitted to neonatal CCUs are low and the outcomes are in line with the KPIs of VON.

MEDICLINIC MIDDLE EAST

Figure 25: Neonatal key performance measures (%)



Re-admission, re-operation and extended stay

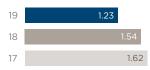
HIRSLANDEN

Figure 26: Re-admission and re-operation rates (%)

Re-admission rate (%)



Re-operation rate (%)



Re-admission rate is reported as a 15-day unscheduled re-admission rate as defined by the International Quality Indicator Project. The 15-day interval was chosen according to the 18-day re-admission criteria of the Swiss DRG system to provide input to the case management process. The 7.98% decrease in the re-admission rate from 1.63% in 2018 to 1.50% in 2019 is not statistically significant.

The re-operation rate decreased by 20.13% from 1.54% in 2018 to 1.23% in 2019. Every single re-admission case is reviewed at hospital level by a member of the quality management team to ensure continuous improvement.

MEDICLINIC SOUTHERN AFRICA

Mediclinic Southern Africa reports on a 30-day all-cause re-admission rate which refers to patients re-admitted within 30 days of the first admission, whether the second admission is related to the first admission or not; and whether it is planned or unplanned.

Figure 27: Re-admission rate (%)

Statistically significant



The 3.48% decrease in the re-admission rate from 12.68% in 2018 to 12.52% in 2019 is statistically significant.

The extended stay index is calculated using the average length of stay of patients in hospital divided by an average expected length of stay of the same patient group. The expected length of stay is calculated based on the diagnoses and procedures for which patients are admitted.

Figure 28: Extended stay index



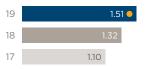
The 3.41% increase in the extended stay index from 1.15 in 2018 to 1.19 in 2019 is not statistically significant.

MEDICLINIC MIDDLE EAST

Figure 29: Re-admission and re-operation rates (%)

Statistically significant

Re-admission rate (%)



Re-operation rate (%)



The division reports on unplanned re-admissions. The 14.39% increase in the 30-day re-admission rate from 1.32% in 2018 to 1.51% in 2019 is statistically significant. Chemotherapy administration, wound care, false labours, maternity-related conditions, lithotripsies, dialysis and removal of an implant are excluded in the calculations. The most common reasons for re-admissions were non-infectious surgical complications, same/worsening symptoms, medical complications and postoperative infections.

The continued increase in the unplanned re-admission rate has been identified as one of the top clinical risks for this division. To effectively manage this risk, a revised reporting framework was implemented to categorise all the re-admission cases in a standardised format per clinical department, per diagnosis and per individual medical practitioner to identify potential trends and implement improvement initiatives where appropriate.

NOT JUST COLLEAGUES, BUT FAMILY

When Mediclinic Southern Africa employee Tania Palvie was diagnosed with placenta praevia late in a much longed-for pregnancy, she had the comfort of knowing trusted colleagues would look after her.



PHOTO: II SE'S PHOTOGRAPHY

Our fertility journey started six

years ago. Like one in seven couples, we couldn't fall pregnant and after trying for three years, decided to opt for IVF treatment. The first round didn't work, but a second round in 2018 resulted in a twin pregnancy.

I heard their perfect little heartbeats during a scan at

seven weeks. We were so excited. Then, three weeks later, I had a miscarriage. Our hearts were shattered. It started to feel like it was never going to happen for us.

We decided to try one last time in March 2019. For us, it was third time lucky. With a whole lot of love and prayer and a bit of science, our little miracle was on her way. The due date of 1 January 2020 was etched into our hearts.

Except for the morning sickness, it was a very healthy pregnancy.

But during the 21-week ultrasound, my gynaecologist, Dr Neltjie Kotze, picked up that the placenta was lying low in the uterus. The doctor raised her concerns with us and suggested bedrest if it didn't move up. We started preparing ourselves mentally in case I had to go to hospital.

At 29 weeks I was admitted to hospital with major placenta praevia. When the placenta blocks the cervix there is a high risk of bleeding and preterm delivery, so I needed to be monitored. For 15 years, I'd been working at

Mediclinic Welkom in the Human Resources department. Now I was experiencing the inner workings of the hospital as a patient.

I quickly got used to my new routine. Every four hours or so, the nurses would take my blood pressure and three times a day, they would bring the cardiotocography machine to monitor the baby's heartbeat. Throughout, the nurses did their best to reassure me and when I had questions, the Unit Manager, Sr Corné van Niekerk, would take the time to explain what was happening.

Over the next 47 days, I really got to know the nurses in the maternity ward. From Sr Dikgang, the baby whisperer, to Sr Aggie, the hand

hygiene queen. Sr Ketso, who smiled day and night, and enrolled nurse Martie, who lit up the ward with her energy. Always friendly and professional, all the nurses worked to keep me positive as we counted down the weeks. Working for Mediclinic I knew what their jobs entailed but it was an eye-opener seeing them in action.

I saw them work in very challenging situations, from emergency C-sections to dealing with five

admissions on a Saturday. Through teamwork they managed to handle the challenges and still look after all the other patients in their care. Being on the other side for once, I developed new respect for my colleagues.

It was the personal touches that kept me sane. Sr Van Niekerk made it possible for me to have my hair coloured and my nails done in my room. The highlight was the maternity shoot we did one Sunday afternoon, four weeks after I was admitted. I'd originally planned an outside shoot, but with the hospital's help, we could realise the most beautiful pictures. I will cherish those photos forever, because they show an important part of our journey.

I had a caesarean at 35 weeks.

At the weekly sonar Dr Kotze had picked up that the placenta was starting to calcify and she didn't want to risk an abruption.

On 4 December 2019 we took our little girl home. It was a moment we'd been dreaming about for six years and it was thanks to our amazing doctor and the dedicated nurses of Mediclinic Welkom. I am proud to work for Mediclinic and count them as my colleagues. But then again, they are no longer just my colleagues, they are family.



> A FRESH LOOK AT PAIN RELIEF

In virtual reality ('VR'), Clinique Cecil has found an innovative way to help patients manage the pain and anxiety associated with medical treatment and procedures.

A brightly painted rowing boat drifts lazily on placid water just metres from a golden beach. Wispy white clouds float above a lighthouse in candy cane colours. Bathed in warm sunlight, it's an idyllic scene – and a world removed from Clinique Cecil in Lausanne, Switzerland, where a patient is viewing the landscape through VR goggles.

The use of VR in the healthcare setting is a promising new solution for pain management. Using 3D visuals, this innovative technology transports the patient into an immersive virtual world. The cutting-edge graphics are so vivid that the user has an overwhelming feeling of 'presence', of being in a different environment to the one in which the physical body finds itself. The effect is enhanced by the use of headphones, which lets the patient listen to calming sounds and carefully scripted hypnotic meditations.

'When Clinique Cecil decided to revise their approach to pain management, the hospital went in search of innovative solutions,' says Anna Ziegler, Specialist: Nursing Policies and Development at Hirslanden. They came across several studies that described the positive effect of VR.

Research has shown VR immersion

is capable of modifying the perception of pain. While initial studies were done on healthy subjects exposed to various pain-inducing stimuli, in recent years therapeutic VR has been put to the test in the clinical environment. In a study by doctors at Cedars-Sinai Medical Centre, VR was shown to significantly reduce pain in hospitalised patients.

"

Because it is so highly immersive, it diverts attention from the source of pain.

Thus far the technology has been tested in a variety of settings. For burn patients, dressing changes are known to be extremely painful. But the use of VR in combination with painkillers noticeably lowered the pain patients experienced. The power of perception goes even further: VR can reduce use of pharmaceuticals. According to Healthy Mind, a French company that creates therapeutic VR programs, a preliminary small-scale study suggests the technology reduces the doses of analgesics

and sedatives needed when inserting catheters. VR has also been used with success to reduce postoperative pain.

Researchers explain the efficacy of VR in its ability to distract the user. Because it is so highly immersive, it diverts attention from the source of pain. And since the feeling of pain can be intensified by anxiety, VR works by having a relaxing effect and boosting positive emotions.

At Clinique Cecil, there are six VR headsets in use: in cardiology. anaesthesiology, dialysis, surgery, maternity and the outpatient surgery centre. One dialysis patient who tried the VR headset typically had very high blood pressure during treatment. But after 10 minutes of using the device, his levels were within normal parameters. Ziegler recounts how another patient, who suffered from chronic pain, initially refused to use VR, disbelieving it would help. The Clinique Cecil personnel persuaded her to give it a try. 'Once she'd been using the headset for a while, she started to cry - it actually relieved her pain.'

While VR headsets may sound futuristic, the approach to prioritising patient experience is true throughout the Group. In every way possible, Mediclinic seeks to enhance clients' quality of life.

Source

'Virtual reality for management of pain in hospitalised patients: A randomised comparative effectiveness trial' https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0219115



ST. ANNA IM BAHNHOF

FACILITY FOCUS

BUILDING A BETTER SERVICE

Through its expansion across the continuum of care, Mediclinic can accompany clients throughout their healthcare journey.

DAY CASE CLINIC

WHERE

Lucerne, Switzerland

WHEN

Opened in late 2018, fully operational in 2019

Conveniently located at the train station in the centre of Lucerne, this day case clinic addresses the increasing demand for same-day surgeries. Hirslanden strategically developed it in response to changes in Swiss healthcare policy that saw several procedures reclassified from inpatient to outpatient. To offer clients a true in-and-out experience, the entire approach has been streamlined:

surgeries of the same type are scheduled consecutively, waiting times between procedures are eliminated and patients are ready for discharge within two hours. The surgery at St. Anna im Bahnhof is complemented by a medical centre that offers an array of services, ranging from specialist consultations and a radiology institute to physiotherapy and nutritional advice.



MEDICLINIC SPRINGS CHILD AND BABY CLINIC

PAEDIATRIC OUTPATIENT CLINIC

WHERE

Dubai, the UAE

WHEN

October 2019

With increasing demand for paediatric services at nearby facility Mediclinic Meadows, but no option to enlarge the premises, the case for opening Mediclinic Springs Child and Baby Clinic was clear. The location is in a high-footfall shopping centre, close to several schools and within a residential area favoured by families. The facility brings together general paediatrics and family medicine, along with paediatric physiotherapy, psychology, and

occupational and speech therapy. Having a multidisciplinary team in one setting is not only convenient for families, but less traumatic for children. The design and layout of the clinic was specially conceived to create a welcoming environment, with child-friendly decor and play areas for distraction. The establishment of this dedicated facility has simultaneously enabled Mediclinic Meadows to expand its non-paediatric services.



ORTHOPAEDIC AND RHEUMATOLOGY HOSPITAL

WHERE

Stellenbosch, South Africa

WHEN

August 2019

In a pioneering partnership with the Institute of Orthopaedics and Rheumatology, Mediclinic Winelands Orthopaedic Hospital brings together orthopaedic surgeons, rheumatologists, rehabilitation personnel and case managers. For South Africans who mistakenly believe they have to travel abroad for highlevel musculoskeletal expertise, the facility is a one-stop solution on local soil. The hospital's multidisciplinary approach enables better clinical

outcomes and more efficient pathways – a critical aspect of value-based care. It is also a training facility that offers accredited fellowship programmes and registrar training in partnership with Stellenbosch University. Developed at the former Mediclinic Stellenbosch premises, the upgraded facility already offers four theatres, 34 beds and 16 consultation rooms, but is undergoing further redevelopment. A dedicated orthopaedic day case clinic with 10 beds and one theatre will be added in 2021.

AWARDS



HIRSLANDEN: Eight hospitals ranked in the top 25 for Switzerland according to *Newsweek*'s list of the World's Best Hospitals 2019



MEDICLINIC SOUTHERN AFRICA: Six hospitals included in Discovery Health's Top 20 Private Hospitals in South Africa 2019, based on the results of patient surveys.



MEDICLINIC MIDDLE EAST: Awards at the UAE's Mother, Baby & Child Awards 2019 for Mediclinic City Hospital (women's health services – gold, maternity services – silver, paediatrics– gold) and Mediclinic Parkview Hospital (Hospital of the Year – silver).

ASSURANCE

ACCREDITATIONS, CERTIFICATIONS, **INITIATIVES AND PARTNERSHIPS**

To provide the necessary independent assurance over the quality and reliability of its healthcare services, processes and facilities, the Group follows a combined assurance model with assurance between management, internal audit and external accreditation and certification. It also partners with leading organisations and educational institutions to expand its services and invest in the future healthcare workforce.

	Detail	Website
ACCREDITATION		
COHSASA	Mediclinic Southern Africa's	www.cohsasa.co.za
COLLEGE OF AMERICAN PATHOLOGISTS	The laboratory at Mediclinic City Hospital in Dubai is accredited by the CAP, which evaluates the entire spectrum of laboratory test disciplines against the most scientifically rigorous customised requirements.	www.cap.org
EUROPEAN FOUNDATION FOR QUALITY MANAGEMENT ('EFQM')	The EFQM was formed to recognise and promote sustainable success and to provide guidance to those seeking to achieve it. Hirslanden applies the EFQM Business Excellence Model throughout its quality management process. Three of its hospitals received three-star excellence ratings.	www.efqm.org
JOINT ACCREDITATION COMMITTEE ISCT-EUROPE & EBMT	The JACIE is Europe's only official accreditation body in the field of haematopoietic stem cell transplantation and cellular therapy. Klinik Hirslanden is the only private hospital in Switzerland to earn JACIE accreditation.	n/a
JOINT COMMISSION INTERNATIONAL	The JCI is a leader in healthcare accreditation and the author and evaluator of rigorous international standards in quality and patient safety. All Mediclinic Middle East facilities were accredited or re-accredited in 2019.	www.jointcommissioninternational.org
SWISS FEDERATION OF CLINICAL NEURO-SOCIETIES	The Swiss Federation of Clinical Neuro-societies promotes collaborations and interactions between clinical neuro-societies in Switzerland to enhance interdisciplinary knowledge and overall impact of all its disciplines. The Stroke Centre at Klinik Hirslanden is accredited by the Swiss Federation of Clinical Neuro-societies.	www.sfcns.ch/portrait.html



¹ COHSASA accreditation is limited to the largest hospitals caring for the more complex cases. These hospitals undergo regular re-accreditation surveys on a rotational basis, the findings of which are shared with the hospitals and with the Mediclinic Southern Africa Corporate Office. Learning points emerging from findings are used to inform focus areas for improvement initiatives which also benefit smaller non-participating hospitals. In addition, the smaller facilities adhere to all the required regulatory requirements and industry standards.

		Deteil	Website
		Detail	Website
CERTIFICATION			
GERMAN CANCER SOCIETY	•	Certification by the German Cancer Society reassures patients that treatment is based on high-quality standards. The Cancer Centre at Klinik Hirslanden has held this certification since 2017. Its certification extends to breast and prostate cancer (including uro-oncology), gynaecological tumours, colon cancer, and haematological and lymphological oncology. The hospital is the first, and only, private institution in Switzerland to obtain this certification.	n/a
ISO 9001:2015	•	This independent international certification shows that the organisation meets world-class specifications for quality, safety and efficiency. All Hirslanden hospitals are ISO 9001:2015 certified.	n/a
SWISS CANCER LEAGUE	+	The Swiss Cancer League is a national, charitable, private non-profit organisation that attends to all aspects of cancer with the aim of ensuring that more people can be treated successfully. A cancer centre must meet about 100 criteria in order to pass external certification. Hirslanden has five certified Cancer Centres.	www.krebsliga.ch

ASSURANCE CONTINUED

	Detail	Website
INITIATIVES		
IQM	The IQM promotes further improvements in medicine through innovative and efficient procedures and thereby setting new standards in quality. In Switzerland, quality measurements using routine data are based on the Swiss Inpatient Quality Indicators (CH-IQI). Hirslanden has been applying these quality management criteria since 2012.	www.initiative-qualitaetsmedizin.de
PRESS GANEY®	Press Ganey® strengthens patient- provider relationships through real-time feedback and performance benchmarks, leveraging state-of-the- art survey methodology. All three divisions use the Press Ganey® platform to measure and report on patient experience.	www.pressganey.com
VERMONT OXFORD NETWORK	VON is a non-profit collaboration of more than 1 300 hospitals to improve neonatal care globally with data-driven quality improvement and research. Currently, 30 Mediclinic Southern Africa facilities and six Mediclinic Middle East facilities participate.	public.vtoxford.org
PARTNERSHIPS		
BERN UNIVERSITY OF APPLIED SCIENCES	Hirslanden partnered with the Bern University of Applied Sciences to provide internships for the master modules 'Clinical Assessment' and 'Advanced Nursing Practice in Primary Care' in the Nurse Practitioner Programme. This is a pilot implementation during which certain physicians will act as supervisors. The project commenced in December 2019.	www.bfh.ch
BOURN HALL INTERNATIONAL MENA LTD	Mediclinic Middle East holds a minority stake in Bourn Hall International MENA Ltd, the holding company for the Bourn Hall Fertility Centre in the UAE, a pioneering and JCI quality-accredited fertility centre.	www.bournhall-clinic.ae
FATIMA COLLEGE OF HEALTH SCIENCES	A memorandum of understanding between Mediclinic Middle East and Fatima College of Health Sciences (established in 2006) facilitates academic collaboration and creates learning and development opportunities for Emiratis. The memorandum of understanding paves the way for students enrolled in Nursing, Health Emergency (paramedics), Pharmacy, Radiography and Physiotherapy to experience on-the-job training in various Mediclinic facilities across the UAE.	www.fchs.ac.ae

		Detail	Website
INITIATIVES			
KANTONSPITAL BASELLAND	•	Hirslanden and Kantonspital Baselland have signed a cooperation agreement for a joint venture in the treatment of musculoskeletal disorders. The joint venture will be established in 2020.	www.ksbl.ch
MOHAMMED BIN RASHID UNIVERSITY OF MEDICINE AND HEALTH SCIENCES		In line with Mediclinic Middle East's partnership with MBRU, Mediclinic City Hospital is approved as a training site for medical students.	www.mbruniversity.ac.ae
STELLENBOSCH UNIVERSITY		In partnership with Stellenbosch University, Mediclinic Southern Africa offers medical students the opportunity to complete their training in Internal Medicine under the supervision of accredited full-time specialists working at Mediclinic hospitals. In 2019, the partnership assisted 160 students.	www.sun.ac.za
UNIVERSITY OF JOHANNESBURG		A memorandum of agreement between Mediclinic Private Higher Education Institution and University of Johannesburg makes provision for collaboration on research, the sharing of intellectual property and opportunity for students to receive practical training in Emergency Medical Care. In 2019, the partnership assisted two students.	www.uj.ac.za
UNIVERSITY HOSPITALS OF GENEVA	+	A PPP has been concluded to create a day case clinic.	www.hug-ge.ch/en
UNIVERSITY OF LUCERNE	+	In partnership with the University of Lucerne, Hirslanden Klinik St. Anna trains medical students from the Joint Medical Master Programme. In 2019, the partnership assisted 133 students.	www.unilu.ch
UNIVERSITY OF ZURICH	+	In partnership with the University of Zurich, Klinik Hirslanden offers medical students the opportunity to complete their training in several perioperative medicine modules. In 2019, the partnership assisted 118 students.	www.uzh.ch
WITS UNIVERSITY DONALD GORDON MEDICAL CENTRE		Mediclinic Southern Africa has a partnership with Wits University and also manages Wits University Donald Gordon Medical Centre, the only private specialist training facility in South Africa and the largest and most successful solid organ transplant centre in the country.	www.dgmc.co.za



INITIATIVE ON QUALITY MEDICINE

IQM is another quality measurement scheme applied by Hirslanden. The initiative has three principles: (a) to measure quality based on routine data; (b) to publish the results to promote transparency; and (c) to improve quality with a peer review procedure. The IQM comprises performance indicators for results, data sets and processes, as well as clinical pictures and treatment forms. More than 380 hospitals participate in Germany and Switzerland; Hirslanden has been a member since 2012.

The peer review procedure is an essential part of the IQM. Clinically active medical practitioners (the peer team) analyse processes and structures systematically in the original medical procedure. A peer review procedure is initialised if the results are significantly above or below the relevant benchmarks. The core of the procedure is the cooperative case discussion. Some benefits of the peer review are the opportunity to uncover local specialities, identify weaknesses and establish an open error culture.

Principles to be applied are, among others, the clarification of statistical peculiarities, clear process rules and interdisciplinary teams.

There are 300 indicators available, of which 44 have already defined quality targets and 23 are related to patient safety issues. The results are provided on a half-year basis and publicly reported annually in May. The performance of all hospitals was measured against a subset of 44 indicators. The performance of the hospitals largely exceeds the benchmark of the initiative.

Table 7: IQM results (January-December 2019) - Hirslanden

Participating hospitals	Proportion of cases in IQM indicators (%)	Number of indicators with target achievement	Number of indicators without target achievement	Achievement level (%)
AndreasKlinik Cham Zug	70.5	22	3	88.0
Clinique Bois-Cerf, Lausanne	49.1	10	2	83.3
Clinique Cecil, Lausanne	89.2	37	4	90.2
Clinique des Grangettes, Chêne-Bougeries	73.4	36	1	97.3
Clinique La Colline, Geneva	54.1	26	0	100.0
Hirslanden Klinik Aarau	83.5	30	9	76.9
Hirslanden Klinik Meggen, Klinik St. Anna AG	38.5	9	1	90.0
Klinik Am Rosenberg, Heiden	49.6	7	0	100.0
Klinik Beau-Site, Bern	85.9	31	7	81.6
Klinik Birshof, Basel	54.7	11	0	100.0
Klinik Hirslanden, Zurich	79.6	33	11	75.0
Klinik Im Park, Zurich	83.8	40	5	88.9
Klinik Linde, Biel	75.4	24	5	82.8
Klinik Permanence, Bern	49.9	16	1	94.1
Klinik St. Anna, Lucerne	81.9	34	7	82.9
Klinik Stephanshorn, St. Gallen	75.0	30	5	85.7
Salem-Spital, Bern	79.4	21	8	72.4

> TRAINING THE NEXT GENERATION

In 2019, Mediclinic Middle East welcomed its first intake of medical students.

It takes years of dedicated studying to become a medical practitioner. But book knowledge can take a doctor only so far – practical experience is essential. To help the doctors of the future gain empirical knowledge, Mediclinic Middle East is making clinical clerkships available.

In May 2016, the division signed an affiliation agreement with MBRU and in September 2019 the first cohort of fourth-year medical students joined various Mediclinic Middle East hospitals in Dubai. This makes Mediclinic the first private hospital group in the UAE to work with academic institutions in a formal capacity. 'As an organisation, Mediclinic is committed to the advancement of medicine through the development and training of the next generation of doctors. It is a great privilege and honour to be able to help these talented individuals progress with the assistance of our

own knowledge and expertise,' says David Hadley, the divisional Chief Executive Officer.

The medical students training under Mediclinic's clinicians complete a 40-week rotation in the departments of Family Medicine, Surgery, Paediatrics and General Medicine. In their fifth year, medical students will do subspecialities as well as Obstetrics and Gynaecology. Once students have completed their full six-year course, including their clerkships at Mediclinic, they will have attained an MBBS degree. The clinical clerkships allow them to hone their skills in real-life situations under the guidance of professionals.

'Mediclinic Middle East is particularly well placed for the role as almost all specialities are represented,' explains Dr Leon du Preez, Senior Corporate Medical Director. The physicians involved all have adjunct faculty appointments, with close to 200 doctors appointed. While many of them have a teaching background, MBRU conducted workshops in teacher training prior to the clerkships getting underway. 'The programme for faculty development is ongoing and will soon involve online courses. The intention is to apply for JCI accreditation as an Academic Medical Centre network in due course,' says Dr Du Preez.

All clinical placements of students were put on hold in March due to COVID-19. The MBRU medical students are continuing with their studies by way of an active online programme in which some Mediclinic faculty are participating. Telemedicine will be another opportunity for the students to gain practical experience and this will be considered in due course.

WHAT THE STUDENTS HAVE TO SAY



Undertaking my clinical clerkship has been an incredibly transformative experience that has allowed me to observe and participate in the application of theoretical concepts to clinical practice. Every team that I have been part of thus far has demonstrated their dedication to education and optimal patient care.



Having the opportunity to learn more from well-versed doctors and cooperative patients has made me humbler and a more curious medical student. The staff at Mediclinic couldn't have been more helpful and supportive than they were, and I thank them for that

Rashed Rowaiee



My favourite part about the experience is witnessing how qualified doctors provide patients with emotional security and high-quality care. My clinical knowledge as well as my interactions with patients have progressed to a level of confidence and professionalism inspired by our doctors and medical educators from Mediclinic.

Anan Alaa Mahmoud



Iman Fawad

PRACTICE IN EMERGENCY CARE

South Africa's Mediclinic Midstream has hosted University of Johannesburg students who are studying Emergency Medical Care. Students are required to see 100 patients and execute a number of skills such as administering oxygen. Mediclinic Midstream is a state-of-the-art hospital with a fully equipped emergency department featuring a procedure room, two resuscitation beds and a hazardous materials shower.

CLINICAL ETHICS SUMMARY

ADVANCED CARE PLANNING, END-OF-LIFE AND TERMINAL CARE

Clinical governance structures are in place to report, audit and address any concerns in line with local regulations and legislation.

2 ASSISTED REPRODUCTIVE TECHNOLOGY AND IVF

Centres providing this service are governed by the local regulatory and legal framework, e.g. in the UAE, Bourne Hall Fertility Centre complies with Federal Law No. (11) of 2008 on licensing fertilisation centres in the country. In addition, compliance is monitored by the licensing authorities during inspections.

3 COMPETENCE AND SCOPE OF PRACTICE

Established clinical governance structures monitor and address concerns. Recruiting the correct skills and continuously assessing the skill-set of employees remain key focus areas. Many strategies are implemented to ensure competency of staff (e.g. formal training, short courses and clinical facilitators).

4 DOCTOR COVER, AVAILABILITY AND RESPONSE

On-call rosters are compiled and available at emergency centres. An established management process and reporting system address non-compliant independent medical practitioners; an established human resources process addresses employed doctors.

DOCTOR QUALIFICATIONS AND PERFORMANCE, AND ILLEGAL PRACTICE

Credentialing and privileging of doctors follows a combined approach – a formal process verifies registration, qualifications and credentials while an informal process solicits performance-related information from peers.

Prevention policies are established and doctors are monitored through annual validation of registration; investigations of deteriorating hospital clinical quality indicators; mortality audits; serious incident investigations; complaints from patients, doctors and staff; medicolegal investigations; ethics line reports; clinical performance committee meetings; direct reporting by doctors; and informal feedback from staff regarding any recurrent concerns.

6 DRUG TRIALS AND MEDICAL RESEARCH

Drug trials and medical research are aligned with the Declaration of Helsinki and local legislation.

All requests for clinical drug trials and medical research are approved by an independent, accredited ethics committee before being accepted for evaluation and approval by the respective divisional committees. All approved trials are recorded on a registry and no unofficial drug testing is allowed. Medical research and experiments are managed by a clinical research approval committee and related policies.

The Group deals with medical ethical issues on a daily basis. Most of these are covered by formal policies, but some are still elusive and quite complex to deal with by way of policy. In all instances, response and reaction are governed by local legislation and regulations.

PROTECTION

The safety of Mediclinic employees and patients is of paramount importance and across the Group it is managed through established IPC measures. Occupational health specialists provide a service at each hospital. On acceptance of employment, all healthcare employees are screened for pulmonary tuberculosis, and screened and vaccinated against Hepatitis B if they do not have sufficient antibodies.

Proper management of sharps injuries and safety procedures are applied at all three divisions. Depending on the geography, HIV/Aids diagnosis and support are offered to affected employees in accordance with local regulations.

Mediclinic's recruitment policies are in accordance with the local legislation of its divisions. At Hirslanden and Mediclinic Southern Africa, the HIV/Aids status of new recruits is not considered during appointment, whereas at Mediclinic Middle East, foreigners planning to work in the UAE must be tested for HIV upon arrival (and thereafter every two years).

In the event of an increase in the incidence or an outbreak of Methicillin-resistant *Staphylococcus aureus*, healthcare employees are screened and decolonised, if necessary.

Flu vaccines are offered annually to employees. Other vaccines, e.g. diphtheria and measles, are offered when there is an indication; when there is an increase in cases in a specific area; or as post-exposure. At Hirslanden, radiation exposure and compliance with prevailing acceptable exposure limits are monitored centrally.

ETHICAL BEHAVIOUR AND BILLING, AND FALSIFICATION OF DIAGNOSIS AND DOCUMENTATION

Operational and clinical management at each hospital is responsible for ensuring the ethical conduct of healthcare practitioners and staff. Human resources policies are in place to address issues of misconduct and criminal behaviour. Regular documentation and clinical coding audits ensure compliance with legal, ethical and operational requirements. Across all divisions, fraudulent behaviour of medical practitioners and staff can be reported via independent ethics lines.

9 EUTHANASIAEuthanasia is neither practised nor condoned in any Mediclinic facility. All hospitals have control measures in place to ensure compliance with local legislation.

10 FORCED FEMALE CIRCUMCISION

Control measures ensure compliance with respective legislation. Informed consent for any medical or surgical intervention or procedure is upheld by the profession and is entrenched in local laws.

11 GENETICS
Genetic testing and counselling are offered in each division according to local regulations and legislation, and in adherence to the relevant ethical framework.
The results of genetic testing are governed by the same data privacy principles and rules which apply to other personal information.

12 INAPPROPRIATE CARE
Appropriate care is a Groupwide focus area. It is managed by
indication boards at Hirslanden, and
CPE at Mediclinic Southern Africa
and Mediclinic Middle East. Cost
reporting and management
processes and structures are in
place. Complex cases are discussed
with treating doctors.

13 ORGAN TRADE
The organ donation and receipt process is carefully documented and is in line with applicable legislation.

PHARMACY
Pharmacy policies,
procedures and audits ensure
compliance with legislation, ethical
and operational requirements.

15 REMUNERATION, KICKBACKS

Perverse incentives are prohibited. Corporate Office and hospital management ensure strict compliance with established rules.

16 REPORTING AND DISCLOSURE OF ADVERSE EVENTS

Each hospital has a formal adverse event reporting system. A 'just culture' (Frankl framework) is promoted. The reporting system is non-punitive and the recorded adverse events are discussed at the hospitals' clinical hospital committees. To prevent similar incidents, learning from incidents is a key focus area.

TECHNOLOGY (INCLUDING ROBOTICS)

Equipment must be CE certified and approved by the local regulator and/or certified by the Food and Drug Administration of the United States. CE marking is a certification mark that indicates conformity with health, safety and environmental protection standards for products sold within the European Economic Area ('EEA'); it is also found on products sold outside the EEA that are manufactured in, or designed to be sold in, the EEA.

Equipment may only be used for the approved indications and as dictated by local or international guidelines. Clinical safety must be proven before any new technology is implemented at a division or in a facility.

18 TERMINATION OF PREGNANCY

Strict control measures exist to ensure legal compliance. In addition, the Group allows employees freedom of choice as to whether they wish to refrain from participating in any terminations of pregnancy for moral, religious, ethical or related reasons.

GLOSSARY OF TERMS

TERM	MEANING
AMS	antimicrobial stewardship
CAP	College of American Pathologists
CAUTI	catheter-associated urinary tract infection
CCRG	clinical and cost-related grouping
CCU	critical care unit
CLABSI	central line-associated blood stream infection
CoE	Centre of Excellence
Company	Mediclinic International plc
CPE	cost per event
DDD	defined daily dose of antimicrobial use
DRG	diagnostic-related grouping
EEA	European Economic Area
EHR	electronic health record
Group	Mediclinic International plc and its subsidiaries, including its divisions in Switzerland, Southern Africa and the United Arab Emirates
HAI	healthcare-associated infection
HIE	health information exchange in Abu Dhabi
Hirslanden	the Group's operations in Switzerland, trading under the Hirslanden brand, with Hirslanden AG as the intermediary holding company of the Group's operations in Switzerland
HPCNA	Health Professions Council of Namibia
HPCSA	Health Professions Council of South Africa
HTA	health technology assessment
IPC	infection prevention and control
IQM	Initiative on Quality Medicine
IVF	in vitro fertilisation
JACIE	Joint Accreditation Committee ISCT-Europe & EBMT, accreditation body for stem cell transplantation
JCI	Joint Commission International, an international quality measurement accreditation organisation, aimed at improving quality of care
KPIs	key performance indicators
LSE	London Stock Exchange

TERM	MEANING
MBRU	Mohammed Bin Rashid University of Medicine and Health Sciences
Mediclinic	Mediclinic International plc
Mediclinic Middle East	the Group's operations in the UAE, trading under the Mediclinic brand, with Mediclinic Middle East Holdings (registered in Jersey) as the intermediate holding company of the Group's operations in Dubai and Abu Dhabi
Mediclinic Southern Africa	the Group's operations in South Africa and Namibia, trading under the Mediclinic brand, with Mediclinic Southern Africa (Pty) Ltd as the intermediary holding company of the Group's operations in South Africa and Namibia
PDMS	patient data management system
Period under review/reporting period	1 January 2019-31 December 2019
PPP	public-private partnership
SAE	serious adverse event
SAPS	Simplified Acute Physiological Score
SIR	standardised infection ratio
SSI	surgical site infection
UAE	the United Arab Emirates
VAP	ventilator-associated pneumonia
VLBW	very low birth weight, as describing newborns who weigh 401-1 500g at birth
VON	Vermont Oxford Network
VR	virtual reality
WHO	World Health Organization

COMPANY INFORMATION

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EPIC number: MDC

LEI: 2138002S5BSBIZTD5I60

Primary listing: LSE (share code: MDC) Secondary listing: JSE (share code: MEI) Secondary listing: NSX (share code: MEP)

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