

GAINING GREATER INSIGHT THROUGH RESEARCH

Research at Mediclinic is made up of a central research office at Group Services as well as a dedicated clinical research office (or clinical trial unit ['CTU']) per division. Representatives from each of these four offices make up the collaborative Group Research Committee, whose purpose is to drive shared research initiatives and promote collective research efforts in all geographies.

KEY CLINICAL RESEARCH HIGHLIGHTS SWITZERLAND

- In 2023, 144 projects were active across our hospitals, with many requiring the support and expertise of the eight-person CTU team. The CTU includes study nurses, study coordinators, trial managers, regulatory experts and data managers.
- Swissmedic, the country's main regulatory body for medicines, successfully concluded a Good Clinical Practice system inspection - testament to the quality of research conducted through the CTU.
- The division's VISION Trial, which focuses on breast cancer treatment options following anticancer therapy, activated City Hospital in Dubai as a study centre in March 2024. The study encompasses facilities across four countries and is a truly global collaboration that leverages the large geographic spread and ethnic mix of the Group's patient population. The Swiss division has taken on sponsor responsibilities for the trial, with the CTU coordinating all activities. In total, 23 hospitals have received regulatory approval and been trained for participation in the study, which is funded in part by various cancer foundations.
- The CTU's acquisition of REDCap software, the leading tool for database management, through the Quality of Life Foundation, bolsters the unit's ability to capture and manage study data, thereby reinforcing research support infrastructure.
- The CTU intensified research support in oncology over the past year to eliminate the need for additional research staffing within our oncology units and to take advantage of the industry and grant funding associated with oncological trials. Additionally, research support extends to small start-ups seeking expertise in product development and assistance to clinicians with investigator-initiated research projects.



Right: Mediclinic's Gale Shabangu and Andriette van Jaarsveld at the HASA Conference. Far right: Mediclinic Middle East Research Conference.



SOUTHERN AFRICA

- The research office welcomed a research administrator and launched the division's research website. In addition to promoting clinical research at various internal forums, the office strengthened academic partnerships with local and international universities and explored partnership opportunities with key external contract research organisations.
- In 2023, 66 research requests were reviewed and 41 approved, 31 studies completed and one manuscript submitted for publication.
- The office ran an abstract drive for the HASA conference, supporting researchers with drafts and submissions. Out of 28 abstracts shortlisted for the HASA conference in September 2023, 11 came from Mediclinic. Nine of these received presentation awards.

THE MIDDLE EAST

- In 2023, the division's researchers generated 86 publications in high-indexed journals, an increase of 14% on the previous year. A total of 24 third-year medical students completed their research dissertations at three of the division's hospitals.
- Hospitals in Abu Dhabi and Al Ain received 100% scores for research and innovation in the Muashir quality rating system implemented by the Department of Health Abu Dhabi.
- City Hospital was the only clinical site in the UAE selected to participate in a phase III multicentre trial, sponsored by the UK-based Loulou Foundation, to examine efficacy and safety of a drug for CDKL5 deficiency disorder.
- The sixth annual Mediclinic Middle East Research Conference, featuring two distinguished international keynote speakers, was held in March 2023. More than 300 professionals attended the conference, which comprised 15 podium and 20 poster presentations. Conference proceedings were published in a journal of Wolters Kluwer.

GROUP RESEARCH OFFICE

This office has three functions:



CLINICAL RESEARCH COORDINATION

- Coordination/joint reporting of activities performed by divisional clinical research offices
- Group research strategy and policy development and implementation
- Group Research Committee drives collaboration, synergies and shared solutions for research
- Commissioned research projects to answer key operational questions and drive improvement



RESEARCH INSIGHTS (MARKET INTELLIGENCE, COMPETITOR AND LANDSCAPE ANALYSIS, HORIZON SCANNING, PROJECT SUPPORT)

- Proactive scanning of global healthcare trends and upcoming innovations
- Market intelligence support for new business/innovation projects
- Primary and secondary project research for key business/innovation projects



HEALTH TECHNOLOGY ASSESSMENT ('HTA')

- Evidence synthesis and desktop research
- Health technology evaluation
- Technology/device identification and comparison according to business need
- Economic evaluation and recommendation

Group Research's first commissioned project was completed in 2023 in collaboration with Stellenbosch University. A mechatronics, automation and design student completed his Master's degree dissertation on the development of a clinical pathway digital twin for hip and knee replacement surgery using Mediclinic Care Expert data.

IDENTIFYING THE BEST-VALUE TECHNOLOGY

To ensure capital is allocated strategically and investments in equipment and interventions are sound, we use HTAs. This involves measuring the clinical and cost-effectiveness, safety, and broader impact of health technologies on those who plan, provide or receive care. We consider a range of technologies: pharmaceutical products, medical devices and prostheses, digital health technologies (including apps, software platforms and therapeutics), surgical equipment, medical consumables and procedures. Research focuses on evidence of a technology's effectiveness by comparing it to the current gold standard and other competitors.

12 HTAs COMPLETED IN 2023

- Proton beam therapy
- Digital (app-based) cognitive function screening tools
- AI-based retinal screening tools
- Fall-prevention devices, including bed nets
- Robotic surgery for various indications
- Oscillation ventilation for neonates
- Nuclear magnetic resonance spectroscopy
- Remote monitoring systems, including medical grade wearables
- Capillary blood collection devices
- Catheter systems for benign prostatic hyperplasia
- Enhanced neurological monitoring and cerebral oximetry systems
- Electroencephalogram ('EEG') spectral analysis



SCOUTING FOR INNOVATIVE SOLUTIONS

Horizon scanning identifies emerging trends and technologies that could disrupt or cause significant shifts in healthcare. In addition to identifying medical breakthroughs, it involves anticipating adjustments in policies, regulations and reimbursement models, as well as changes in patient demographics and consumer behaviour. Group Research is responsible for analysing developments so Mediclinic can respond proactively to take advantage of opportunities and mitigate risks.

In 2023

30 trends

and 33 opportunities identified

84 cutting-edge health technologies pinpointed

130 potential partners or competitors recognised

72 innovation incubators observed

285 noteworthy developments detected

In each division we have teams dedicated to enabling research.

THE POWER OF RESEARCH

‘Somewhere, something incredible is waiting to be known.’ The words of scientist Dr Carl Sagan point to the importance of research – it is the work of experts across our divisions to ensure that vital knowledge is brought to light.

In each division we have teams dedicated to enabling research who assist investigators with study guidance, regulatory assistance, project management, monitoring and data management. Since our medical practitioners are practising clinicians, rather than full-time researchers, they value this support. In Switzerland, for example, the clinical trial unit supports practitioners by running a two-day Good Clinical Practice course in effective patient-oriented research for investigators and associated personnel – a regulatory requirement for any study.

Importantly, we ensure that all research conducted within Mediclinic adheres to regulations and ethical standards to protect patient rights. Multidisciplinary committees weigh up risks and benefits before any study may begin. During the research phase, we review monitoring and safety reports to make sure studies stick to the approved protocols and standards. In Switzerland,

stringent reviews by cantonal ethics committees ensure the protection of study participants. Our commitment to the highest standards of research is made clear by the special accolade the Ethics Committee of our research office in the Middle East earned. At the Department of Health Abu Dhabi’s research day in 2023, the committee was recognised as one of the most active research ethics committees.

Our research offices foster ties with other institutions to enhance research outcomes and keep Mediclinic at the leading edge. We collaborate with several Swiss medical schools and one of the universities of applied sciences while, in the Middle East, we have a long-standing, mutually beneficial relationship with MBRU, among others. Our research office in Southern Africa has formalised academic collaboration with the Medical and Engineering faculties of Stellenbosch University and also enjoys a good working relationship with other leading academic institutions. Wits Donald Gordon Medical Centre and Winelands Orthopaedic Hospital in Southern Africa both have their own dedicated research teams.



Our clients need us to do as much research as possible so we can continue to provide them with treatment that transforms their quality of life.

Student-led research offers another opportunity to answer the clinical questions we have identified. At several of our hospitals, we conduct training of medical students (see pages 51-55) – a chance to show young talent that academic endeavours also flourish within a private hospital group. It also opens the doors for collaborative research efforts with universities.

Tertiary institutions are not the only ones looking to cooperate with us. The International Professional Society for Health Economics and Outcomes Research has invited Mediclinic to join their dedicated data providers in contributing to and collaborating on value-driven research in health, starting with Southern Africa. Our divisions in Switzerland and the Middle East are moreover part of the TriNetX global research network – and Southern Africa will be joining them soon.

Thanks to our multinational footprint and diverse client base, Mediclinic is an attractive partner for biotech and biopharmaceutical companies. The FDA recently mandated diversity and inclusion as key components in clinical trials. A 2020

analysis by the FDA of global participation in clinical trials showed that more than 70% of participants were white, yet ethnicity can dramatically influence a drug's appropriate dose. Men and women may respond differently to a treatment, as might adults of different generations. Conducting multisite studies within Mediclinic makes it possible for corporates to target a more diverse patient population to the benefit of all people.

With research established in all the geographies where we operate, we are putting more of a focus on a Group perspective. The goal is to coordinate the work so our clinicians can collaborate effectively and we can streamline our efforts. The Group Research Committee, which includes research-interested individuals from other business areas alongside members of our research offices, identifies synergies and shared solutions to leverage expertise across our combined geographies. The Group Research workshop in February 2024 was an important milestone, bringing together participants from all divisions to formulate a shared strategy and execution plan. The first research project commissioned by

Group Research recently concluded and we are proud that a pioneering collaborative study between our divisions in Switzerland and the Middle East, the VISION clinical trial, is under way. By joining our forces, we can leverage the extraordinary levels of knowledge and expertise across our divisions. Our clients need us to do as much research as possible so we can continue to provide them with treatment that transforms their quality of life. After all, somewhere new discoveries are waiting to be made.

Type of research we do

- ✓ Prospective and retrospective observational, descriptive, cohort and case-control studies
- ✓ Case studies and case reports
- ✓ Single and multicentre phase II, III and IV interventional trials including randomised controlled trials

VISION Trial

First cross-divisional research effort

135 patients

17 hospitals in Switzerland

5 hospitals of partners in Germany and Austria

1 hospital in the Middle East

