

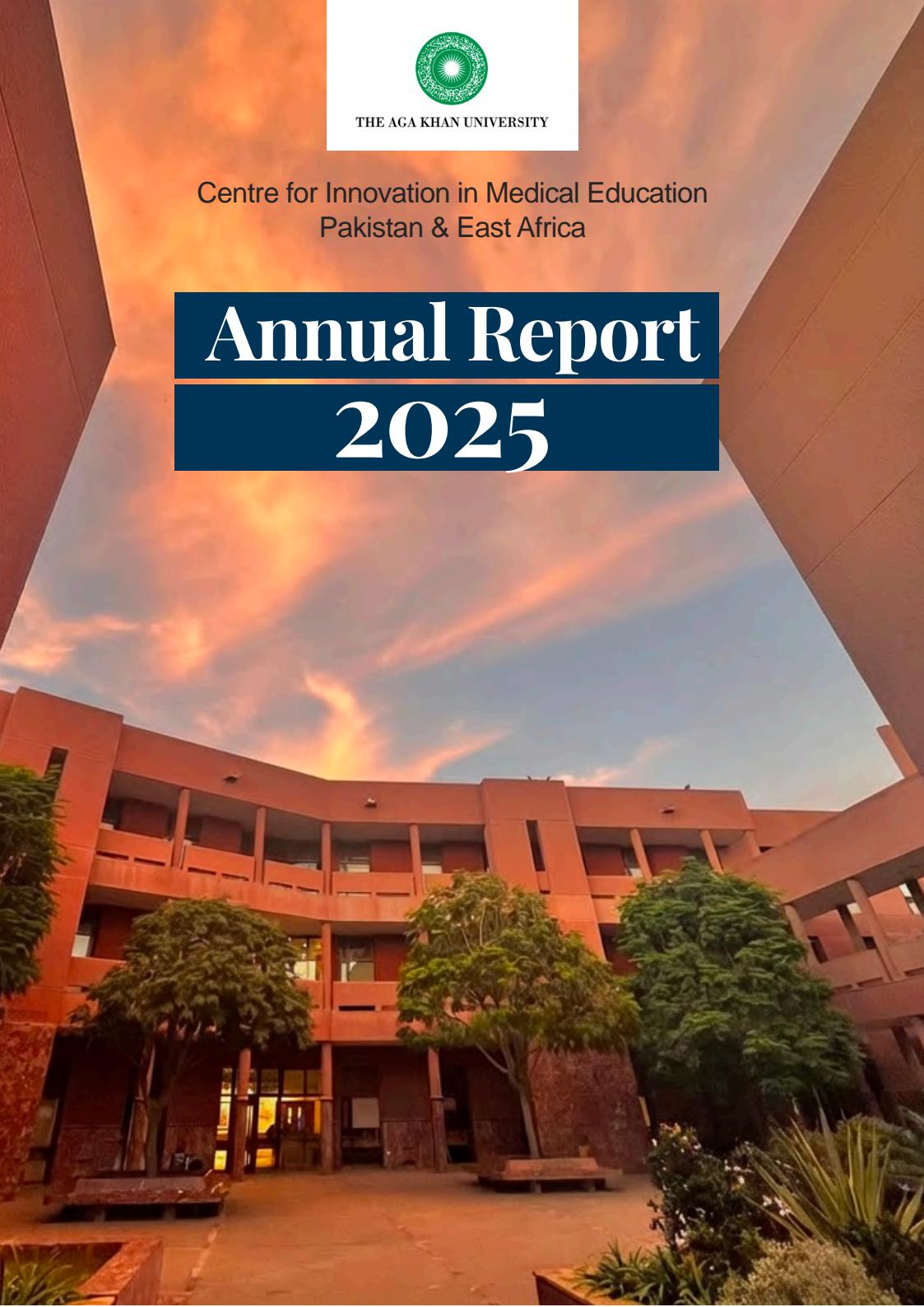


THE AGA KHAN UNIVERSITY

Centre for Innovation in Medical Education
Pakistan & East Africa

Annual Report

2025



Contents

“Everyone's life is a passage, and perhaps the most one can do is to have left something behind during that passage which contributes and assists people ***to look to their future with more confidence, more stability, and more hope.***”

- His Highness Prince Karim Aga Khan IV
All India TV & Radio Interview with Rajiv Mehrotra - 1989

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2025 reminded us what's possible...

when passionate teams work
together with a shared mission
for better healthcare.



Directors' Message

Guided by the 7 pillars of the **AKU-Onwards Strategic Plan**, namely **Quality and Breadth of Education, Knowledge Creation and Dissemination, Learning Healthcare Systems, Leveraging Data Sciences & Technologies, Environmental Protection & Stewardship, Sustainability & Growth, and Partnerships & Collaborations**, we ensured that simulation remains a powerful enabler of safer care and stronger health systems.

Across Karachi, Nairobi, and our newest home in Dar es Salaam, CIME continued to grow as a space where imagination becomes impact. From the SIMPACT 2025 conference, which brought together bold thinkers and changemakers, to the creation of in-house, low-cost simulators tailored for our local healthcare realities, this year was defined by solutions built for the communities we serve.

CIME **strengthened health systems** through strategic partnerships within AKU, across the AKDN, and with national and international collaborators. Our teams delivered hundreds of simulation-based learning experiences regionally and remained the only centres in our countries offering specialised programmes to strengthen the healthcare workforce.

Sustainability remains central to our direction. At CIME, we are committed to **financial, operational, and environmental sustainability**, embedding efficiency, scalability, and local capacity building into our programmes and technologies.

CIME Karachi hosted international examinations, reinforcing its role as a trusted centre of excellence. Across East Africa, **new partnerships and programmes** expanded simulation-based learning and strengthened CIME's regional and **global impact**.

To all our faculty, staff, partners, and learners: Thank you for believing in this mission. Your energy, curiosity, and courage shaped every milestone of this year. As we step into 2026, we carry forward a shared vision of safer care, empowered professionals, and a future where innovations in education transform healthcare for every community we reach.

Dr Michael Moneyppenny
Regional Director, CIME East Africa

Dr Faisal Ismail
Regional Director, CIME South Asia

2025 taught us...

that the future of simulation
lies in solutions that respect
our planet, its resources,
and its people.

SIMPACT 2025 *Sustainability in Simulation*

SIMPACT 2025, hosted by CIME Karachi and Nairobi, brought together Pakistan and East Africa for a dynamic, real-time exchange on advancing healthcare simulation. Centered on the theme **“Sustainability in Simulation,”** the conference, attended by more than 600 participants in both regions, highlighted key financial, operational, and environmental challenges shaping the future of simulation-based training.

With 43 skill-building workshops, over 300 research abstracts, and 100 presentations across both regions, the event showcased CIME’s leadership as the largest simulation centres in the respective countries, and its growing impact on healthcare education.

Through SIMPACT 2025, CIME demonstrated how simulation can serve as a catalyst for **learning healthcare systems**—where education, innovation, and service improvement are continuously integrated. The conference stands as a tangible reflection of AKU’s IQRA values, delivering **impactful, relevant, high-quality, and accessible** education for diverse stakeholders.

43

pre-conference
workshops

330

research
abstracts

600+

conference
attendees

900+

workshop
attendees

Environmental Protection
& Stewardship



Knowledge Creation
& Dissemination





SIMVENTION

Showcase of Student Innovations in Healthcare Simulation Technology

Launched at SIMPACT 2025 in Karachi, SIMVENTION was created to unlock healthcare simulation innovation by bringing academia, industry, and emerging talent into one shared space. Designed as a catalyst rather than a competition, SIMVENTION enabled engineers, clinicians, simulationists, and AI/XR developers to build, test, and showcase solutions with real-world relevance. The initiative revealed the depth of regional talent, fostered meaningful cross-disciplinary collaboration, and laid the groundwork for a sustainable ecosystem that supports the journey from idea to applied simulation technology.

Leveraging Data Science & Technologies



Sustainability & Growth



Partnerships & Collaborations



56
projects received

12
projects shortlisted for display

3
winners

2025 reminded us...

that learning transforms lives
when knowledge is experienced,
not just taught.

Updates from Pakistan

Delivering Quality and Breadth of Education through Simulation

From CIME's very own simulation workshops to partnering with academic entities across AKU, across Pakistan, and even beyond, CIME Karachi hosted a myriad of workshops, trainings and capacity-building programmes in 2025, for healthcare as well related professions, utilizing simulation-based education pedagogies.

CIME Karachi's top 5 super users at AKU:

- Division of Nursing Education Services (NES)
- Undergraduate Medical Education (UGME)
- Department of Surgery
- School of Nursing and Midwifery (SONAM)
- Department of Medicine

3,600+
Trainings/sessions
in 2025

64,000+
Total participants/attendees
in 2025



Knowledge Creation
& Dissemination



Pakistan's *only* capacity-building courses in healthcare simulation.

Clinical Simulation Educators Programme (CSEP)

30
healthcare
educators certified

Clinical Simulation Technologists Programme (CSTP)

17
technologists
certified

Simulation-Based First Responder Training

154
first responders
trained

Professionals trained from:

- FMIC, Kabul
- University of Lahore
- Post Graduate Medical Institute (PGMI), Peshawar
- Peoples University of Medical & Health Sciences, Sindh
- Dow Institute of Medical Technology, Karachi
- Sir Syed College of Medical Sciences, Karachi
- Time University, Multan
- Aga Khan Health Services, Gilgit
- The Aga Khan University
- Medinostic Healthcare Pvt. Ltd.
- Alsons Technology Pvt. Ltd.



Pakistan's *only* first aid course for young mothers

CIME's first-of-its-kind First Responder Course for Mothers empowered caregivers through practical, simulation-based training to manage common home emergencies. Addressing a need, the course covers burns, bleeding, fractures, head and neck injuries, CPR, choking, and drowning, strengthening confidence, preparedness, and safety nationwide.

04
cohorts **90+**
mothers trained



Collaborations

In 2025, collaboration was at the heart of simulation at CIME. By partnering with departments across and beyond AKU, we transformed shared goals into engaging, high-impact simulation experiences.

Training Health Care Assistants

CIME advanced its patient-safety agenda by launching a needs-based, simulation training programme for Home Care Assistants in collaboration with the AKUH Outreach Services. The initiative has trained 68 HCAs so far, improving clinical skills, reducing service delays, and enhancing patient satisfaction, with plans to scale further.



SAFE Workshop

The SAFE Project: 'Simulation Advancing Family-Centered Care and Emotional Safety' led by the Department of Emergency Medicine, is pioneering family-centered, emotionally safe pediatric care in Pakistan. Three SAFE workshops have trained over 75 participants, integrating compassionate communication into invasive procedures.



Corneal Transplant Training

For the first time at AKU, CIME partnered with the Department of Ophthalmology to conduct DMEK corneal transplant simulation training on human tissues, providing hands-on, high-fidelity surgical experience to participants.



Rescue Rangers

CIME, in partnership with The Dawood Foundation, conducted Rescue Rangers at the MagnifiScience Centre, Karachi, delivering first aid training for children. The programme taught essential lifesaving skills, empowering young learners with confidence, awareness, and practical emergency response knowledge.



Advancing Surgical Safety with J&J

In collaboration with the Johnson & Johnson Institute, UAE, CIME hosted a Surgical Site Infection workshop led by Dr. Giles Bond-Smith, bringing together surgeons and OR teams to explore strategies for preventing infections and enhancing patient safety.



Endoscopic Ultrasound

The Basics of Endoscopic Ultrasound (EUS) course was conducted for gastroenterologists and ERCP fellows, providing hands-on training, practical skills, and foundational knowledge to enhance diagnostic accuracy and procedural confidence in advanced endoscopic practice.



Clinical Escape Rooms

CIME hosted two engaging escape rooms, and a webinar on HealthySimulation.com, all exploring how clinical escape rooms are transforming simulation education by enhancing teamwork, sharpening clinical skills, and creating immersive, memorable learning experiences that make healthcare training engaging and effective.



Dermatology 101

CIME, in collaboration with Sehat Kahani and dermatology experts at AKU, conducted a capacity-building workshop, using advanced moulage techniques to provide realistic, hands-on training that enhanced clinical skills and understanding of dermatological care.



Raabta Workshop

In collaboration with the Department of Surgery, CIME hosted a simulation-based workshop for their clinical hotline service. The training empowered nursing staff through immersive scenarios focused on communication, triage, escalation, and standardized call documentation.



Pediatric Academy Summit

Our simulation specialists teamed up with AKU faculty to deliver an engaging, hands-on learning experience at Abbott's Pediatric Academy Summit 2025 in Islamabad, bringing simulation-based Neonatal Resuscitation Programme (NRP) training to 250+ doctors from across Pakistan.



Point-of-Care Ultrasound

In collaboration with the Department of Emergency Medicine, CIME successfully delivered four cohorts of the Point of Care Ultrasound for Life Support in Emergency (PULSE) workshop, with plans to continue the same course in 2026 due to high demand.



Pre-University Programmes

CIME partnered with the Registrar's Office to conduct engaging sessions for pre-university students, offering a specialized simulation center tour and an immersive medical moulage masterclass, providing a unique, hands-on insight into the world of health sciences.



Campus-wide *in-situ* emergency drills

In 2025, CIME bolstered institutional readiness by conducting over 20 in-situ emergency activation drills across AKU in collaboration with the AKU Resuscitation Committee. These simulations bridged the gap between theory and practice, testing rapid response capabilities in both clinical wards and non-clinical areas to ensure a seamless, high-standard safety net for the entire university community.

24
in-situ drills

90+
tested/trained



Learning Healthcare
Systems



Bringing *international exams* to Karachi

CIME reinforced its global standing by hosting prestigious international examinations, including the MRCS (Edinburgh) and, for the first time in history, the MRCP (UK) in close collaboration with the AKU Medical College, Pakistan. Approved as an official site, 14 faculty members were also accredited as MRCP examiners. The Centre also facilitated local CPSP exams, cementing its role as a premier hub for high-stakes medical assessment.



Updates from East Africa

Expanding our functions to *Dar Es Salaam*

With the inauguration of its newest campus in Dar es Salaam, Tanzania, CIME has expanded its regional footprint beyond Karachi and Nairobi. Officially opened at Salama House by Dr. Kenneth Hosea and AKU President Dr. Sulaiman Shahabuddin, the facility is designed to transform East African healthcare training through high-fidelity simulation and immersive, hands-on environments. The new center reinforces AKU's commitment to building resilient health systems and advancing clinical excellence across the region.



Trainings at CIME Nairobi

From CIME's very own simulation workshops to partnering with healthcare clinicians, educators and academic entities across AKU, and beyond, CIME Nairobi hosted a myriad of workshops, trainings and capacity-building programmes in 2025, for healthcare professionals, utilizing simulation-based education pedagogies.

Top 5 AKU super users:

- UGME Medical College
- Continuing Medical Education
- UGNE SONAM
- PGME Medical College
- Family Medicine

447
Trainings/sessions
in 2025

7,900+
Total participants/attendees
in 2025

CSEP 2025

Our three-day CSEP equipped educators with skills to design effective scenarios, facilitate learning through simulation, and create psychologically safe environments that promote confidence, collaboration, and innovation in education.



Endoscopy Training Course

Clinicians enhanced diagnostic and therapeutic endoscopy skills through hands-on simulation, interactive demonstrations, and expert mentorship, emphasizing procedural precision, patient safety, and high-quality, patient-centered care in endoscopy procedures.



Paediatric Peritoneal Dialysis Training

Participants developed hands-on competence in pediatric peritoneal dialysis, practicing techniques, managing complications, and applying lifesaving skills confidently under expert supervision in simulated clinical settings.



Basic FATE Course

The Basic FATE course trained clinicians in focused cardiac ultrasound through expert instruction and hands-on scanning, enabling rapid bedside assessments and informed decision-making in acute care settings.



EPALS Training

EPALS training strengthened pediatric emergency response through simulation-based scenarios, skills stations, and team-based resuscitation drills, emphasizing leadership, communication, and effective teamwork during critical situations.



CSEP Dar es Salaam

Eleven faculty members in Dar es Salaam completed a two-day CSEP, strengthening simulation-based teaching capacity and supporting curriculum integration, innovation, and improved student learning and patient safety outcomes.



KRACON 2025, Mombasa

CIME participated in KRACON 2025, sharing insights on simulation and innovation in kidney care while engaging with regional experts to advance education and practice in nephrology.



Non-Technical Skills for Surgeons (NOTSS) Masterclass

The NOTSS Masterclass explored communication, leadership, and situational awareness through hands-on learning, reinforcing essential non-technical skills that enhance surgical safety and team performance.



Point-of-Care Ultrasound (POCUS) Training

This POCUS training strengthened ultrasound-guided vascular access skills using a custom-built phantom trainer, providing a safe, realistic environment to build confidence and improve procedural accuracy.



Moulage Magic

SPIE hosted a hands-on moulage workshop at CIME Nairobi, for nursing and medical students, enhancing simulation realism through creative techniques that brought clinical scenarios to life.



VR Innovation: Standing By

CIME's first VR video, *Standing By*, immersed residents in a challenging workplace scenario to build resilience, emotional intelligence, and practical life skills for navigating medical training.



2025 reminded us...

that the most impactful
innovations are born closest
to the challenges they aim to solve.

Homegrown Innovations *Inspired by local needs.*

CIME's homegrown innovations reflect AKU's commitment to knowledge creation, sustainability, and environmental stewardship. By designing low-cost, locally made task trainers - such as neonatal heel prick, colonoscopy, and bone marrow biopsy simulators - CIME addresses contextual needs while reducing reliance on expensive imported technologies, ensuring affordable, reusable, and adaptable training solutions for low- and middle-income settings.

Heel Prick Simulator

CIME Karachi has developed a Dried Blood Spot sample collection task trainer in collaboration with the Department of Pathology & Laboratory Medicine, addressing high sample rejection rates. Combining a portable full-body manikin with a refillable, realistic heel, it offers a cost-effective, sustainable solution for training in accurate infant blood collection.



Colonoscopy Task Trainer

CIME Nairobi developed a silicone-based colonoscopy task trainer tested by surgeons at Aga Khan Hospital, Nairobi. Their hands-on feedback is guiding refinements, advancing a practical, high-quality training tool that supports skill development and improved patient care.



Pelvic Bone Marrow Task Trainer

The team also developed a pelvic bone marrow task trainer prototype tested by a hospital clinician. The trial validated its potential and provided valuable feedback, guiding refinements as work begins on an improved second prototype for hands-on medical training.



Advancing Research in Simulation

2025 marked a pivotal year for research at CIME, aligning strongly with AKU's commitment to **knowledge creation and impact**. The Centre secured its first research grants, published peer-reviewed manuscripts, and presented scholarly work at leading international conferences. Research initiatives explored simulation ethics, virtual reality, patient safety, and educational outcomes, ensuring that innovation at CIME remains evidence-informed and globally relevant. These efforts support **AKU's IQRA** values by linking quality, relevance, and access with measurable impact.

Grants received:

- A USD 6,000 extramural grant from the Association of SP Educators (ASPE) to support the development of guidelines for the ethical and practical integration of child and adolescent simulated participants in healthcare simulation.
- An AKU-SoTL intramural grant of USD 1,550 was awarded for a study evaluating the impact of Virtual Reality training on adherence to American Heart Association (AHA) guidelines, enhancing CIME's research and innovation portfolio.
- Tox Simulation Summit: Mastering Toxicology Emergencies

3

grants received

10

conference presentations

4

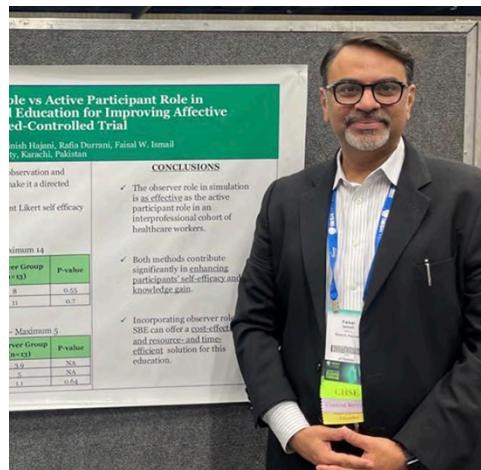
manuscripts published

8

manuscripts under review



Knowledge Creation & Dissemination



SeeMe Around the Globe

Partnerships & Collaborations



Partnerships remained central to CIME's strategy in 2025. CIME actively participated in international healthcare and simulation conferences, presenting oral and poster sessions to share innovations and advancements in simulation-based education. Our team also engaged in expos and university visits, fostering valuable networking opportunities and exploring potential partnerships to further enhance simulation in medical training globally. Some of these were:

- International Meeting on Simulation in Healthcare (IMSH), USA
- Society in Europe for Simulation Applied in Medicine (SESAM) Conference, Spain
- Association for Simulated Practice in Healthcare (ASPiH) Conference, UK
- S3 Conference, Singapore
- World Congress of Trauma & Emergency, Brazil
- Royal College of Anaesthetists & Scottish Society of Anaesthetists Joint Conference, UK
- Global Network for Simulation in Healthcare Summit, Copenhagen
- GITEX - Gulf Information Technology Expo 2025, Dubai & Singapore
- Advancing Medical Education in Africa, Rwanda
- International Patient Safety Conference, Pakistan
- Meetings, keynote talks, and presentations for various entities within AKU, AKDN network, local universities, partners and stakeholders across Pakistan and East Africa.



2025
reminded us...

that *people* are our greatest
strength.

The Dream Sim Team

Three cities, one vision!

CIME's achievements are powered by its people—the educational, technical, and administrative teams whose collaboration across Pakistan and East Africa creates a strong, unified force. By combining pedagogical expertise, technical innovation, and operational excellence, this collective reflects AKU's belief that people are its **greatest asset** and that lasting impact is built through shared purpose, collaboration, and continuous growth.

Team CIME East Africa



Team CIME Pakistan



The Aga Khan University
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Pakistan & East Africa

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