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GLOBAL SURGERY ORAL SESSIONS ABSTRACTS

BRIDGING THE LANGUAGE GAP IN SURGICAL EDUCATION: A FRENCH LANGUAGE ADAPTATION OF THE COSECSA SURGICAL FOUNDATIONS COURSE

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Keywords : COSECSA, French translation, SURGhub, Surgical education.

The Surgical Foundations Course, developed by the College of Surgeons of East, Central, and Southern Africa (COSECSA) and hosted on the open-access SURGhub platform, is a broad-based, 38-topic, 80-module curriculum for Membership of the College of Surgeons trainees, designed to reflect the surgical realities and resource context of the COSECSA region. While widely accessed in African countries where English is the primary language of surgical training, participation from countries where French is the primary language of medical education has been limited by linguistic barriers, which adversely impact comprehension, training quality, and patient communication.

To quantify this need, we modeled potential demand for a French-language version using SURGhub user data and engagement tracking, applying uptake rates equivalent to those observed in English-medium training countries in the region. Demographic data from 2,314 learners with known details (73% of total SURGhub users enrolled in the Surgical Foundations Course) and United Nations mid-year 2025 population estimates were used to calculate a learner-to-population ratio of 1.68 learners per million in English-medium countries. Applying this ratio to 395.6 million people living in African countries where French is the primary language of medical education yielded an estimated 665 potential learners after adjusting for incomplete demographic data. The translation and adaptation process, led in partnership with Francophone surgeons and surgical educators, is in its final stages. A structured, multi-step workflow incorporated artificial intelligence–assisted translation (ChatGPT, Amazon Web Services with Hero Translate, and the localization function within Articulate 360) followed by iterative, expert clinical review to ensure terminological accuracy, linguistic precision, and preservation of educational intent within the regional context. This initiative will deliver a linguistically inclusive, contextually grounded surgical curriculum that strengthens regionally defined training priorities, promotes equity in surgical education, and advances the goal of building surgical capacity through collaboration.

MOVING TOWARDS EQUITY: LEVERAGING ACADEMIC PARTNERSHIPS IN SURGICAL EDUCATION

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Keywords : Academic partnerships, Collaboration, Global Surgery Education

Background
Low-and middle-income countries experience significant faculty deficits, which limit the delivery of quality surgical education and research. Academic partnerships have been established to address this by supporting faculty development, resource mobilization, and improvement of training infrastructure. We evaluate an African attempt at partnership-based surgical education at the University of Global Health Equity (UGHE).

Methodology
A convergent mixed-methods study was conducted to collect data using a quantitative survey, qualitative Key Informant Interviews, In-depth interviews, and a desk review of all surgical education and partnership documents at UGHE. Data was obtained from faculty, partners, and students who undertook surgical education programs at the university. Analysis was performed using descriptive and inductive thematic analysis.

Results
UGHE had built a strong partnership network with diverse geographical backgrounds and expertise; 33% were from Rwanda (Fig. 1). More than half (58%; n=24) of UGHE's partners had formal MOUs and were involved in curriculum development (42%), didactic training (33%), clinical and medical simulation training (13%), student assessment (29%), faculty development (4%), and research (13%). UGHE adopted the partnership-based model to fill in critical gaps in the surgical education workforce and financing. Eighty-one percent (n=26) of undergraduate students strongly agreed that the visiting faculty improved their overall learning experience. Qualitative results showed that respondents valued access to shared

resources, diversity of experiences, and the opportunity to learn from surgical sub-specialty experts. Emergent themes included the impact of resource limitations at local partner teaching hospitals on the learners' clinical experience.

Conclusion
The study found that the partnership model improved access to essential resources and opportunities for the stakeholders. This model of surgical education can achieve demonstrable academic improvements that benefit both learners and faculty. To ensure balanced collaboration, regular evaluation is essential to nurture sustainable partnerships and inform the co-creation of interventions required to further advance equity.

STRENGTHENING SURGICAL EDUCATION IN LMICS: HARNESSING ETHIOPIA'S NATIONAL PERIOPERATIVE QUALITY IMPROVEMENT NETWORK AS A PLATFORM FOR CAPACITY BUILDING

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Keywords : NaPQIN, Peri-operative, registry.

Background
Surgical education in LMICs is based mainly on evidences generated from studies in developed nations. Moreover, only few can trace perioperative status of patients limiting specific epidemiologic and clinical data and undermining the practicality of trainings and translation of evidences to policies. This article aimed to present the ongoing efforts put forth and lessons learned in generating local evidences by establishing perioperative registry to support academics and perioperative care improvement in Ethiopia.

Method
National Perioperative Quality Improvement Network (NaPQIN) represents a locally designed, nationally aligned, collaborative data collection, research, and learning platform. NaPQIN captures data across the full surgical care continuum using standard metrics by supporting facilities to implement registries, contribute to a federated national system while maintaining local ownership and data security. Timely recognition of trends, patient outcomes, and system gaps are enabled through real-time data analysis and intuitive dashboards.

Results
The ongoing NaPQIN registry has so far tracked more than 50,000 surgical cases in its platform in five regional states across Ethiopia. NaPQIN has trained more than 250 healthcare professionals, initiated & assisted the implementation of over 15 Quality Improvement projects. Moreover, this has enabled real-time monitoring of surgical outcomes, nationwide surgical outcome study (Ethio-SOS), enabled patient rescue systems in Hospitals, enabled implementation researches.

Conclusion and the way forward
The perioperative registry enables capturng patient-level outcomes data generating essential KPIs in Hospitals. The ongoing implementation outcome from NaPQIN underscores the role of peri-operative registry in supporting contextualized trainings, improving data literacy, continuous measurement of trainee competence, and surgical care.

COMPARING OPERATIVE EXPOSURE OF PAEDIATRIC SURGERY TRAINEES ACROSS THE COSECSA REGION USING THE E-LOGBOOK

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Keywords : E-logbook, operative exposure, paediatric surgery fellowship.

COSECSA offers a fellowship program in paediatric surgery, where the volume and range of surgical procedures performed by trainees are crucial assessment components. Eighteen accredited hospitals provide this fellowship, with variations in resources such as laparoscopic facilities and paediatric intensive care units. Despite these differences, previous analyses of logbook data show substantial experience in common paediatric surgical procedures among trainees. However, it remains unclear whether exposure to various procedures is equitable among trainees at different centers. This research seeks to determine if paediatric surgery trainees at different COSECSA training hospitals receive equitable exposure during their training.
It was a retrospective descriptive study that analysed 11 accredited training hospitals that in the COSECSA regions and logbook entries that were complete and filled between 2015-2024 were included. The study calculated the total number of cases logged by trainees at each training center, identified patterns in the different types of cases logged by trainees at each center and quantified to what extent trainees from different training hospitals gain exposure to procedures as required by COSECSA's curriculum. The preliminary findings showed that 26,732 procedures were logged by 47 paediatric surgery trainees across 11 hospitals across

COSESCA. The highest number of procedures were recorded at Tikur Anbessa Hospital in Ethiopia representing 19.37%. While the lowest record was at Harare Children's hospital in Zimbabwe contributing only 0.05%. On the other hand, Queen Elizabeth Central Hospital in Malawi offered the highest procedural exposure to trainees throughout their training, with an average of 937 cases per trainee. These results show that there are differences in the total number of procedures performed by trainees at different training centres, hence affecting the exposure of trainees through the fellowship program. This brings the need to consider setting standardized exchange programs to allow trainees to get an equitable exposure to surgical experience.

IMPLEMENTATION OF THE ENTRUST LEARNING AND ASSESSMENT PLATFORM FOR UNDERGRADUATE MEDICAL EDUCATION: MULTIDISCIPLINARY CURRICULUM INTEGRATION AT THE UNIVERSITY OF GLOBAL HEALTH EQUITY, RWANDA

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Keywords : competency-based medical education, multidisciplinary, undergraduate medical education, virtual patient simulation

Background:
Robust and accessible evidence-based tools are critical for advancing competency-based medical education globally. ENTRUST is an online, case-based virtual patient simulation platform to teach and assess clinical decision-making. This study describes multidisciplinary longitudinal ENTRUST integration across surgery, internal medicine (IM), and obstetrics and gynecology clerkships at the University of Global Health Equity in Rwanda.

Methods:
Following a successful pilot in 2023, ENTRUST was integrated into the Senior Surgery Clerkship for case-based learning, formative assessment (Mid-Clerkship Assessment), and summative assessment (End-of-Clerkship Assessment) in November 2023. A similar model was implemented in the Senior OBGYN Clerkship April 2024 for case-based learning and summative assessment (End-of-Clerkship Assessment). The platform has been piloted in Internal Medicine and Pediatric Clerkships with case development ongoing. ENTRUST cases were integrated in the Medical School Exit Examination July 2024 and 2025 (n=30 and n=36, respectively). Usability and validity evidence were evaluated by platform utilization, System Usability Scale (SUS), and correlation to OSCE performance.

Results:
From 2023–2025, 66 medical students participated in the curriculum integration in one or more clerkships (Figure 1). Usability was high [Surgery: 77.9 (2.3); IM: 87.0 (14.6)]. Surgery Clerkship students completed median 14 learning case attempts (IQR:12–17) and 115 minutes (IQR:80–147) independent learning; in OBGYN, median 4 learning cases (IQR 1–8) and 30 minutes (IQR 0–81); and in IM, 1 case and 15 minutes

(IQR 12–16). ENTRUST performance correlated positively with OSCE scores for Surgery End-of-Clerkship Assessment (r=0.45,p=0.01) and Exit Examination (r=0.37,p=0.04).

Conclusion:
ENTRUST is being successfully integrated in a multidisciplinary longitudinal fashion across surgery, OBGYN, and internal medicine clerkships for learning and assessment. Usability and acceptance of the platform is high, supporting its promise as a scalable multidisciplinary platform for competency-based undergraduate medical education.

BUILDING SURGICAL CAPACITY IN BURUNDI: COMPETENCY-BASED TRAINING, PARTNERSHIPS, AND PATIENT IMPACT

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Burundi faces significant surgical workforce shortages, making sustainable training models essential. At Village Health Works (VHW), we have developed a competency-based model that integrates service delivery with surgical education, allowing general practitioners to progressively gain surgical skills in the operating theatre and then train others. This builds a sustainable cascade of knowledge transfer tailored to Burundi’s rural context.
Currently, six GP's are in surgical training through this model, supported by partnerships with international institutions including ReSurge International and independent surgeons.
We have worked in collaboration with ReSurge for plastic and reconstructive surgery teaching campaigns that combine high patient volumes with hands-on training. In addition, VHW collaborates with independent surgeons in specialties such as orthopedics and plastic surgery to further expand training opportunities. VHW admitted 1,777 patients across wards in the beginning of 2025, creating opportunities to align patient care with structured learning.
Successes include creating reliable pathways for surgical training, attracting international expertise, embedding philanthropy into program design to sustain teaching visits, and developing partnerships that extend teaching capacity.
Challenges include ensuring consistent patient case mix and volume across specialties, retention, balancing service delivery with structured mentorship, limited infrastructure for simulation/digital learning, and the need for additional policy support to integrate competency-based training for non-specialist providers into the national framework.

This presentation will outline VHW’s experience in advancing surgical training in Burundi, highlighting the role of competency-based teaching, partnerships with institutions, independent surgeons, and philanthropy in strengthening local surgical capacity. We argue that this combined approach—training through service while embedding sustainability—offers a rural replicable model for low-resource contexts aligned with COSECSA’s mission.

INFORMED CONSENT IN SURGICAL PRACTICE - BRIDGING ETHICAL PRINCIPLES AND IMPLEMENTATION CHALLENGES IN THE DEMOCRATIC REPUBLIC OF CONGO: A QUALITATIVE EXPLORATION

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Keywords : Informed Consent, Patient Autonomy, Resource-Limited Settings, Surgical Ethics

Background: Informed consent is fundamental to ethical surgical practice but faces systemic challenges in resource-limited settings like the Democratic Republic of Congo (DRC). This study assessed the implementation and respect of surgical consent processes in the DRC, focusing on patient experiences.

Methods: A national qualitative study was conducted via an online questionnaire (Google Forms) distributed through social media and healthcare networks. Participants included 263 Congolese adults who underwent surgery or provided consent for a child's procedure. Data collection captured experiences with consent disclosure, comprehension, decision-making autonomy, and perceived pressures. Thematic analysis identified barriers and improvement suggestions.

Results: Critical deficiencies were identified:
- Only 50.2% received risk/complication disclosures; 45.3% were offered surgical alternatives.
- 34.6% reported pressure to consent; 32.7% felt unable to refuse surgery.
- 38.0% never signed consent forms; 19.8% of signatories could not comprehend the form's language.
- Decision-making was clinician-led (28.9%) or family-led (29.3%) in 58.2% of cases.

Thematic analysis revealed demands for:
1. Plain-language explanations (77.4% of suggestions)
2. Enhanced risk/alternative disclosure (32.2%)
3. Reduced pressure and adequate deliberation time (17.4%)

Conclusions: Surgical consent in the DRC frequently fails to meet ethical standards, characterized by inadequate disclosure, linguistic barriers, and power imbalances. Context-sensitive reforms are urgently needed, including:
1. Adopting "sufficient consent" standards prioritizing material risks.
2. Developing pictographic/multilingual consent tools.
3. Implementing clinician communication training and patient feedback systems.
These measures must balance communitarian decision-making norms with individual autonomy to transform consent from perfunctory documentation to meaningful dialogue.

PRIMARY TRAUMA CARE IMPLEMENTATION OUTCOMES ON EMERGENCY RESPONSE PERSONNEL'S COMPETENCIES: A PRINCE REGENT HOSPITAL QUASI-EXPERIMENTAL STUDY

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Keywords : Competencies, Emergency Response Personnel, Life & Limb Primary Trauma Care, Low-Resource Settings

Background: Trauma is a significant global health issue, particularly in low and middleincome countries with limited resources. Annually, trauma causes approximately 6 million deaths and countless disabilities, burdening healthcare systems, especially in low and middle-income countries. Yet, structured trauma training for emergency response personnel remains scarce in countries like Burundi.

Aim: This study aimed to evaluate the outcomes of implementing the Life & Limb Primary Trauma Care training program on Emergency Response Personnel's competencies from Prince Regent Hospital in Burundi.

Research design: A before-and-after quasi-experimental design was used in this study.

Methods: This study involved 50 subjects. Training was implemented over a period of 12 months. A pretest and posttest assessment were done to measure subjects' knowledge, skills, and attitudes about Life & Limb Primary Trauma Care training program. Testing was done before and immediately after Life & Limb Primary Trauma Care training program implementation, and after 1 month.

Results: Findings demonstrated significant improvement in subjects' competencies following Life & Limb Primary Trauma Care training program implementation. Knowledge scores increased from a mean of

11.24 pretest to 15.30. Skills assessment showed substantial gains, with primary survey skills rising from 25.32 to 34.78 and secondary survey skills from 42.28 to 61.72. Attitude scores also improved markedly, with confidence levels increasing from 22.72 pretest to 33.68.

Conclusion: The Life & Limb Primary Trauma Care training program proved effective in enhancing Emergency Response Personnel's competencies from Prince Regent Hospital in Burundi. Recommendations include integrating Life & Limb Primary Trauma Care training program into academic curricula. Further research should include conducting longitudinal studies to assess long-term retention, training sustainability and the impact on patients care related outcomes.

ASSESSMENT OF RESPONSE TO NEOADJUVANT THERAPY IN BREAST CANCER PATIENTS TREATED AT A FAITHBASED REFERRAL HOSPITAL IN KENYA

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Keywords : Breast cancer Neoadjuvant systemic therapy Receptor subtype Resource-limited settings

Background: Breast cancer is the second leading cause of cancer-related deaths among women in Kenya, with most patients presenting at advanced stages. Neoadjuvant systemic therapy (NST) is a cornerstone of treatment for locally advanced breast cancer globally, but limited data exist on its use in Kenya.

Methods: We conducted a retrospective cohort study of 135 patients with biopsy-confirmed breast cancer treated at AIC Kijabe Hospital. Demographic and clinical data, including age, stage, histology, receptor status, treatment, and response were analyzed. Clinical and pathologic staging were compared to assess tumor downstaging, with outcomes evaluated by age and receptor subtype.

Results: The mean age was 47 years. Most patients presented with locally advanced disease (52.7% T4; 69.4% node-positive; 55.5% stage III). After NST, 13.3% achieved complete pathologic response in the breast, and 10.1% were downstaged to stage 0. Stage III disease decreased from 55.5% clinically to 33.0% pathologically. Receptor distribution was 43.7% HR+/HER2−, 15.6% HR+/HER2+, 10.3% HR−/HER2+, and 21.5% triplenegative. Response varied significantly by subtype (p=0.03): 80% of HR−/HER2+ and 42.3% of triple-negative patients showed no response. Only 48.3% of triple-negative patients received platinum-based therapy,

while 54.3% of HER2-positive patients accessed trastuzumab. Axillary surgery was almost exclusively full dissection (97.5%), as sentinel lymph node biopsy was unavailable.

Conclusion: NST improved operability and downstaged a subset of tumors, but responses were limited by restricted access to receptor-specific therapies and modern surgical techniques. Poor outcomes in triple-negative and HER2-positive patients highlight the need to expand access to platinum-based regimens, HER2-targeted therapy, and sentinel lymph node biopsy. Strengthening diagnostic capacity and adapting treatment guidelines to local contexts are essential for improving outcomes in resource-limited settings.

BENIGN BREAST DISEASE IN LIMITED RESOURCES- PART OF A CURRICULUM

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Keywords : breast benign curriculum LMIC

Benign Breast Disease (BBD) encompasses a range of non-cancerous conditions that account for a significant portion of breast clinic referrals worldwide. While breast symptoms are common and often benign, distinguishing these from malignancy remains a challenge, especially in the absence of effective screening systems. This paper explores the diagnostic and therapeutic approaches to BBD, focusing on common conditions such as mastalgia, fibrocystic changes, fibroadenomas, nipple discharge, and phyllodes tumours, among others.

BBD often presents with symptoms that mimic malignancy, such as lumps, pain, and discharge, which can be distressing for patients. The paper emphasizes the importance of a comprehensive diagnostic approach, including clinical evaluation, radiological assessments, and histopathological examination, collectively known as the "triple assessment." Despite the benign nature of these diseases, some conditions require surgical intervention, especially in the case of significant breast deformity or complications like infection.

It is essential to distinguish BBD from physiological changes in the breast, such as cyclical hormonal fluctuations, that do not fall under the classification of disease. These physiological changes, while common, are not considered pathological and generally do not require medical intervention, although they can lead to symptoms like discomfort or benign lumpiness. In contrast, BBD involves more persistent and distinct conditions that may require treatment or monitoring.

The challenge of classifying BBD is highlighted, with two prominent systems—Dupont and Page's histological classification and Hughes'

Aberrations of Normal Development and Involution (ANDI) framework—both offering distinct perspectives but often leading to
confusion. This work also addresses the management of BBD in resource-limited settings, where delayed presentations often require oncoplastic surgical skills to prevent disfiguring procedures.

COMPARATIVE EFFECTIVENESS OF PLATELET-RICH PLASMA VERSUS HONEY IN DIABETIC WOUND HEALING: A CLINICAL AND PATIENTREPORTED OUTCOME EVALUATION

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Keywords : Diabetic wounds, PRP, Patient-Reported Outcomes, WOUND-Q

Background: Chronic diabetic wounds pose a significant clinical and psychosocial burden, particularly in low-resource settings. Platelet-Rich Plasma (PRP) and honey have emerged as affordable alternatives for wound management. However, comparative data evaluating both clinical outcomes and patient-reported experiences are limited.

Objective: To compare the effectiveness of PRP and honey in diabetic wound healing, and assess patient satisfaction using the validated WOUND-Q tool over an 8-week treatment period.

Methods: We conducted a prospective comparative study involving 38 patients with diabetic foot wounds—20 treated with PRP and 18 with honey. Three additional patients were lost to follow-up after initial dressing. Clinical parameters included fasting blood sugar, HbA1c, wound dimensions, Texas Wound Classification, and complications (infection, ischemia). WOUND-Q domains—including pain, drainage, appearance, psychological and social impact, and satisfaction—were evaluated weekly.

Results: PRP-treated wounds showed a significantly greater reduction in wound dimensions at weeks 4 and 8 ($p<0.05$). Both groups reported similar overall patient satisfaction; however, honey-treated patients reported higher WOUND-Q drainage scores (mean 61 vs 74, $p=0.03$). Texas Class 1D and 2D were associated with higher complication rates. Smokers had significantly worse scores across clinical and WOUND-Q domains. No cases of ischemia were observed.

Conclusion: PRP is more effective than honey in accelerating diabetic wound healing without compromising patient-reported experience. WOUND-Q proved valuable in capturing nuanced perceptions of treatment,

particularly in areas like drainage and appearance. Integrating patient-reported outcomes into wound care trials enriches the clinical narrative and supports holistic care.

CLINICAL AUDIT OF VENOUS THROMBOEMBOLISM (VTE) RISK ASSESSMENT AND GUIDELINE COMPLIANCE IN SURGICAL PRACTICE

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Keywords : Caprini score, patient education, prophylaxis, quality improvement

Background
Venous thromboembolism (VTE) remains a major cause of preventable morbidity and mortality among surgical inpatients. Despite established international guidelines, adherence to prophylaxis protocols is often suboptimal in clinical practice.

Objective
To evaluate and improve adherence to VTE risk assessment and prophylaxis guidelines among surgical patients at Port Sudan Doctors Hospital through a structured clinical audit.

Methods
A two-cycle prospective clinical audit was conducted. The first cycle (September 2024) involved a retrospective review of 50 surgical inpatient records and a gap analysis through staff interviews and observations. A two-month intervention followed, introducing a standardized VTE risk assessment tool, staff training, and integration of clinical workflows. The second cycle (January-April 2025) included a prospective review of 41 patient records and qualitative staff feedback. Data were analyzed descriptively and thematically.

Results
Compliance with VTE prophylaxis guidelines improved significantly from 6% in the first cycle to 85.4% in the second. Patient education increased from 4% to 95.1%, and proper documentation of prophylaxis duration improved from 6% to 95.1%. The use of structured risk assessment tools (e.g., Caprini score) increased from 7.1% to 50%, while inappropriate pharmacological prophylaxis for low-risk patients was eliminated. Staff engagement and usability of tools were also enhanced.

Conclusion

Targeted interventions, including standardized risk assessment and focused staff education, significantly improved VTE prophylaxis practices. Sustained improvements will require continued auditing, digital integration of tools, and institutional support to promote longterm adherence and patient safety.

LEARNING CURVE OF LAPAROSCOPIC CHOLECYSTECTOMY IN LOW-RESSOURCE SETTING : AN EXPERIENCE OF A JUNIOR SURGEON BY ANALYSIS THE CUMULATIVE SUM OF AUTONOMY

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Keywords : cholecystectomy, cumulative sum analysis, general surgery training, laparoscopy, learning curve

Background
Laparoscopy is the gold standard technique of cholecystectomy. In surgery, learning curve is defined as time and or number of procedures to curry out a procedure with reasonable outcome.The aim of our study was to determine the moment of a safe laparoscopic cholecystectomy done independently by a junior surgeon under mentorship of an experienced surgeon.

Methods
Our study was a retrospective one single-centre of 17 patients who underwent a laparoscopic cholecystectomy over a period of 6 months. The learning curve was evaluated by the cumulative sum analysis of the roles perfomed by the junior surgeon as assistant, under supervision and independently. The junior surgeon had assisted laparoscopic procedures during his residency and had done a training at IRCAD AFRICA before.

Results
A total of 17 patients were included. The mean age was 39 years (21-57) with a sex ratio of 0.06. 5 patients (29.4 %) had history of cholecystitis. There were no per and post operative complications. The average lengh of hospitalization was 1.06 days (1-2). The CUSUM analysis showed that the autonomy was achieved at 8th procedure with consistent independence in performing the following procedures.

Conclusion
Laparoscopic cholecystectomy is the gold standard of care for symptomatic cholelithiasis. A safe laparoscopic cholecystectomy is feasible by training with menthorship and the CUSUM is a good tool for evaluation of surgical performance.

HARNESSING ARTIFICIAL INTELLIGENCE IN THE DEVELOPMENT OF VIRTUAL PATIENT SIMULATION CASES FOR SURGICAL TRAINEE EDUCATION IN EAST, CENTRAL, AND SOUTHERN AFRICA

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Keywords : Artificial Intelligence, Clinical Competence, Patient Simulation, Surgical Education

Introduction: Artificial Intelligence (AI) is being rapidly integrated into professional workstreams, including surgical education. AI-generated virtual patient case scenarios have been shown to improve trainee knowledge and clinical judgement. In June 2025, the College of Surgeons of East, Central, and Southern Africa (COSECSA) partnered with ENTRUST, an online virtual patient simulation platform, to develop practice cases in alignment with the Membership of the College of Surgeons (MCS) trainee curriculum. This study evaluates the feasibility, efficiency, and accuracy of using AI to develop the virtual patient simulation cases.

Methods: Using iterative prompt engineering with Abacus AI, a platform that integrates collections of large language models, a case template was developed in the ENTRUST platform format. Each case consisted of a simulation phase (diagnostic work-up and initial stabilization and management) followed by multiple-choice questions (MCQs) assessing perioperative care and procedural knowledge. Faculty leaders selected clinical topics, and AI-generated cases underwent expert review by surgeons. A quality improvement framework captured generation time, review duration, and identified errors. Descriptive statistics and thematic analysis were performed in Excel.

Results: From June 2025 to August 2025, 116 cases generated by Abacus AI underwent faculty review. The average duration for AI generation and

faculty review was 7.6 and 52 minutes per case, respectively. A total of 32 (31.7%) AI-generated cases had an error identified by reviewers, most commonly attributed to treatment inconsistent with clinical guidelines, omission of a physical exam component, or discordancy between history, physical exam and diagnostic work-up.

Conclusions: AI is a feasible and efficient tool for generating virtual patient simulation cases. The rapid production of cases can reduce faculty workload and support consistent trainee learning opportunities. However, errors in multiple domains highlight the necessity of expert faculty oversight. Continued scrutiny and refinement of AI-generated content is required to ensure safety, reliability, and educational validity.

VIRTUAL REALITY FOR SURGICAL TRAINING IN BURUNDI

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Burundi faces a severe shortage of physicians (0.1 per 1,000 people). This scarcity is compounded by difficulties in training healthcare professionals, due to insufficient infrastructure, urban concentration of doctors, limited funding, and brain drain. Innovative approaches to medical education are crucial to addressing these challenges. We describe a relatively novel tool for surgical training in Burundi- the use of virtual reality (VR) in surgical training. This was the first initiative of its kind in the country.
A series of half-day VR-based surgical training workshops were conducted for medical learners and educators, including medical students, postgraduate doctors, senior physicians, and faculty. A total of 41 participants attended the workshops. Each session began with a presentation, followed by hands-on engagement with VR headsets displaying pre-recorded cadaveric dissections and surgical procedures. Audio explanations were delivered through the headsets either via pre-recorded commentary or live narration from the workshop facilitator. Post-session feedback was collected using questionnaires.
Among the 41 attendees, 25 participants (response rate: 61%) completed the feedback questionnaire. This cohort comprised medical students (36%), resident doctors (40%), and senior physicians or consultants (24%). Only 12% had prior experience with VR. Participants reported VR technology as very easy (44%) or somewhat easy (52%) to use. The majority (96%)

believed that VR could be a valuable addition to their standard medical training. Key perceived benefits included enhanced understanding of anatomy, procedural knowledge, and surgical skill acquisition. Identified barriers to implementation included infrastructure limitations, cost, internet connectivity, and digital literacy.

This study shows that the use of VR is feasible in our setting and is acceptable to learners.

VR could be integrated into surgical education. To achieve sustainable implementation, future efforts should focus on developing long-term partnerships, evaluating the technology and assessing the impact of VR on surgical skill acquisition.

IMPLEMENTATION OF THE ENTRUST LEARNING AND ASSESSMENT PLATFORM FOR UNDERGRADUATE MEDICAL EDUCATION: MULTIDISCIPLINARY CURRICULUM INTEGRATION AT THE UNIVERSITY OF GLOBAL HEALTH EQUITY, RWANDA

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Keywords : competency-based medical education, multidisciplinary, undergraduate medical education, virtual patient simulation

Background:
Robust and accessible evidence-based tools are critical for advancing competency-based medical education globally. ENTRUST is an online, case-based virtual patient simulation platform to teach and assess clinical decision-making. This study describes multidisciplinary longitudinal ENTRUST integration across surgery, internal medicine (IM), and obstetrics and gynecology clerkships at the University of Global Health Equity in Rwanda.

Methods:
Following a successful pilot in 2023, ENTRUST was integrated into the Senior Surgery Clerkship for case-based learning, formative assessment (Mid-Clerkship Assessment), and summative assessment (End-of-Clerkship Assessment) in November 2023. A similar model was implemented in the Senior OBGYN Clerkship April 2024 for case-based learning and summative assessment (End-of-Clerkship Assessment). The platform has been piloted in Internal Medicine and Pediatric Clerkships with case development ongoing. ENTRUST cases were integrated in the Medical School Exit Examination July 2024 and 2025 (n=30 and n=36, respectively). Usability and validity evidence were evaluated by platform utilization, System Usability Scale (SUS), and correlation to OSCE performance.
Results:
From 2023–2025, 66 medical students participated in the curriculum integration in one or more clerkships (Figure 1). Usability was high [Surgery: 77.9 (2.3); IM: 87.0 (14.6)]. Surgery Clerkship students completed median 14 learning case attempts (IQR:12–17) and 115 minutes (IQR:80–147) independent learning; in OBGYN, median 4 learning cases (IQR 1–8) and 30 minutes (IQR 0–81); and in IM, 1 case and 15 minutes

(IQR 12–16). ENTRUST performance correlated positively with OSCE scores for Surgery End-of-Clerkship Assessment (r=0.45,p=0.01) and Exit Examination (r=0.37,p=0.04).

Conclusion:
ENTRUST is being successfully integrated in a multidisciplinary longitudinal fashion across surgery, OBGYN, and internal medicine clerkships for learning and assessment. Usability and acceptance of the platform is high, supporting its promise as a scalable multidisciplinary platform for competency-based undergraduate medical education.

EVALUATION OF PROBLEM BASED LEARNING AS A TRAINING METHOD AND ITS ROLE IN PRODUCTION OF FUTURE DOCTORS.

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Keywords : Problem Based Learning

Problem-Based Learning (PBL), introduced in 1969 by Dr. Howard Barrows at McMaster University, is a student-centered educational approach that emphasizes active learning through small group discussions and clinical case analysis. Unlike traditional lecture-based methods, PBL encourages students to identify learning objectives and independently seek solutions. This approach fosters self-directed learning, critical thinking, creativity, and teamwork, skills essential for future medical professionals.
As PBL continues to replace conventional teaching methods in many medical schools, it is vital to evaluate its effectiveness. Understanding how students, educators, and practicing doctors perceive PBL helps identify its strengths and weaknesses, ensuring continuous improvement and relevance in clinical training.
This study aims to assess the impact of transitioning from traditional lecture-based instruction to PBL, gather the perspectives of students, lecturers, and alumni, and explore how well PBL prepares doctors for real-world clinical practice. Focus Group Discussions (FGDs) will be used as the primary method of qualitative data collection. FGDs will facilitate
open, interactive conversations that allow participants to share in-depth insights and lived experiences; information that might not emerge through quantitative methods alone.
Expected findings include initial challenges in adapting to PBL, as well as insights into how it has positively and negatively influenced learning and teaching experiences.
Participants are likely to highlight key strengths such as increased engagement and integration of knowledge, along with challenges like inconsistent facilitation or resource demands.

In conclusion, regular evaluation of PBL is necessary to maintain its relevance and effectiveness in training competent, adaptable, and practice-ready doctors. This study will provide valuable feedback from all stakeholders involved, informing future improvements in medical education and helping align teaching methods with modern healthcare demands.