



RCSI/COSECSA COLLABORATION PROGRAMME

Annual Report for 2020

Submitted to Irish Aid

9th April 2021

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Executive Summary

2020 began on a positive note with the launch of the RCSI/COSECSA Collaboration Programme's (CP) new project to build the anaesthesia workforce in East, Central and South Africa. The declaration of the COVID-19 pandemic in March cast uncertainty over many projects however, as all upcoming CP-related travel, and in-person events were immediately put on hold.

Despite the challenges presented by the pandemic, there were also many highlights during the year. In May the CP carried out a retention survey of recently-qualified COSECSA surgeons. 91.5% (n=115) of the respondents were practicing as surgeons in Africa, and 80% in the country where they had trained, typically their home country. In June, following an international recruitment process, COSECSA appointed Ms Stella Itungu to the role of Chief Operating Officer. CANECSA also appointed an Administrative Officer. The CP supported the recruitment process for both posts.

In August COSECSA passed a milestone when the 250,000th surgical case was recorded in the COSECSA eLogbook. The CP produced an infographic showing the demographic data and the surgical needs across the region. The eLogbook continues to be hosted by RCSI and a number of new features were added this year to improve its user-friendliness. Two CP papers on eLogbook data were published in the World Journal of Surgery this year.

Online learning was a key area of work with the CP continuing to support the Basic Science course and the development of a new, bespoke online Research Methodology course both of which are hosted on *schoolforsurgeons.net*. The CP also established the first eLearning platform for CANECSA trainees, *learn.canecsa.com*. As no examiner exchanges were possible between RCSI and COSECSA during the year, the CP worked with Sage Foundation in a corporate philanthropy venture to produce an online Examiner Training course.

In September, COSECSA made its maiden journey into online exams, replacing the traditional written exam with online exams and electronic grading. This spirit of innovation continued with the clinical exams being held in a 'blended hybrid' format of online and onsite assessments across seven countries over six weekends in December and January. A record number of 109 candidates passed the Fellowship exams bringing the cumulative total number of COSECSA Graduate surgeons to 559. COSECSA has thus exceeded its headline goal of graduating 500 surgeons by 2020.

Throughout the year, the CP worked with COSECSA on its strategic planning process. Fifty external stakeholders gave feedback. COSECSA's 2021-2025 plan was published in December. The workplan of the CP for the next four years supports and complements this plan.

The CP believes that the goals set out for the 2017-2020 period have been largely achieved. Our focus for the next four years is now on working with our partners to achieve better-quality surgical care for more patients in sub-Saharan Africa.

RCSI/COSECSA COLLABORATION PROGRAMME HIGH LEVEL ACHIEVEMENTS



RCSI INSTITUTE OF
GLOBAL SURGERY



COLLEGE OF SURGEONS
OF EAST, CENTRAL
& SOUTHERN AFRICA

559
COSECSA
GRADUATES



2019: 450

290,000



SURGICAL CASES
RECORDED IN THE
E-LOGBOOK

2019: 200,000

800 CURRENT
COSECSA
TRAINEES

2019: 748

19% FEMALE
TRAINEES



2019: 18%

FEMALE
GRADUATES **15%**

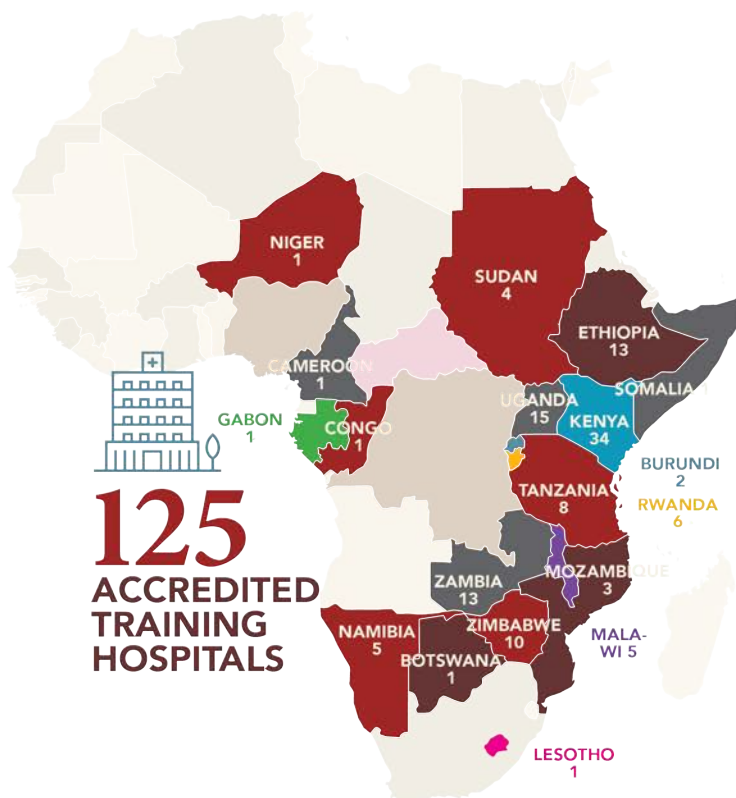
2019: 14%

92% GRADUATES
PRACTICING
IN AFRICA

2017-2019

298

NEW
ENROLMENTS
IN 2021 INTAKE



125
ACCREDITED
TRAINING
HOSPITALS

EXAM INNOVATION



ONLINE EXAMS REPLACED
WRITTEN EXAMS



HYBRID' ONLINE/ONSITE
CLINICAL EXAMS



CENTRALISED ELECTRONIC
MARKING SYSTEM



240 EXAMINERS COMPLETED
ONLINE EXAMINER TRAINING COURSE

BUILDING THE ANAESTHESIA WORKFORCE

2 NEW
PARTNERS



CAI (College of Anaesthesiologists of Ireland) and CANECSA
(College of Anaesthesiologists of East, Central and Southern Africa)



8 COUNTRIES

35 CANDIDATES
FOR FIRST
EVER EXAM

learn.canecsas.com
NEW E-LEARNING PLATFORM



[RCSI.COM/COSECSA](https://www.rcsi.com/cosecsa)

@RCSI_COSECSA



Irish Aid
Rialtas na hÉireann
Government of Ireland

DATA AS AT 28 FEBRUARY 2021

Introduction: The RCSI/COSECSA Collaboration Programme

Partnership model

Since 2007, the Royal College of Surgeons in Ireland (RCSI) and the College of Surgeons of East, Central and Southern Africa (COSECSA) have been working together to increase the number of trained surgeons practicing in sub-Saharan Africa and to make better surgery accessible to more patients.

- RCSI University of Medicine and Health Sciences is an international not-for-profit university, with its headquarters in Dublin, focused on education and research to drive improvements in human health worldwide.
- COSECSA is a non-profit professional body whose mission is to promote excellence in surgical care, training and research in Sub-Saharan Africa. It is headquartered in Arusha, Tanzania and currently has 14 member countries with accredited training sites in 18 countries, thus reaching a population of over 400 million people.

The CP is a formal partnership between the two organisations which is funded by the Irish public, through Irish Aid. To date, Irish Aid has provided over 5.1 million EUR to the partnership. Irish Aid's Development Cooperation and Africa Division (DCAD) has identified the CP as a strategic partnership within DCAD's Multi-annual Financial Framework (MAFF) for Global Health and HIV/AIDS for the period 2017-2020.

In November 2019, two additional organisations joined the CP to work on building the anaesthesia workforce in sub-Saharan Africa:

- The College of Anaesthesiologists of East, Central and Southern Africa (CANECSA) has eight member countries and is also headquartered in Arusha, Tanzania. CANECSA aims to advance education, standards, and research in safe anaesthesia and critical care for the people of East, Central and Southern Africa.
- CAI, The College of Anaesthesiologists of Ireland, exists to promote high quality practice in the fields of Anaesthesia, Intensive Care and Pain Medicine through its training, examinations and educational programmes. As a recognised Training Body, the College is responsible for setting training standards and for the organisation, supervision and counselling of doctors in training in Ireland.

Oversight, administration and budget

The CP is governed by a Steering Committee¹ which has representation from both RCSI and COSECSA. This committee met three times in 2020. Within the overall framework of the CP, the Anaesthesia project is overseen by its own Steering Group which has representatives from CAI and CANECSA. This committee met monthly during 2020.

The CP employs a full-time Programme Coordinator who is based at RCSI and works closely with the professional Secretariat of COSECSA to implement the agreed CP

¹ See Appendix II Steering Committee Membership

workplan. In 2020, the CP drew on the expertise of the Programme Director – Education, Training and Advocacy at the RCSI Institute of Global Surgery (IGS) to manage the new Anaesthesia project.

In April, prior to the disbursement of planned funds, Irish Aid requested the CP to re-examine the proposed budget for 2020. Irish Aid wished to divert any CP funds that could be made available to the COVID-19 humanitarian response in developing countries. In recognition of the challenges that hospitals and healthcare systems in Africa faced in responding to the pandemic, the Collaboration Programme agreed to re-direct €85,000 from its budget to Irish Aid's COVID-19 response. As a result, the final budget for the Collaboration Programme for 2020 (including the sum of €100,000 for the anaesthesia project received in December 2019) was €415,000.

The CP is housed within IGS and maintains close ties with the Department of Surgical Affairs. The CP receives considerable in-kind support from across RCSI.

Goals and Outcomes

The CP had two overarching goals for the four-year period (2017-2020) of its mandate:

- Goal 1: Ensure the financial and operational sustainability of COSECSA.
- Goal 2: Ensure the quality of the COSECSA training, examination and accreditation model, and enhance the quality of surgical care practice in the region.

These goals have been broken down into six outcomes in the annual work-plans. The CP believes that these twin goals have now been largely achieved. This report will outline some highlights under each outcome during the year.

Expression of gratitude

After many years of service, Prof Ciarán O'Boyle, Prof Declan Magee and Prof Ruairí Brúgha stepped down from the Steering Committee during the year. Their time and expertise on the committee is greatly appreciated. Prof Camilla Carroll, Prof Mark Shrimme and Prof Patricia Eadie have all joined the committee in recent months.

The CP would like to acknowledge and thank those who generously volunteered their skills during the year. Particular thanks are due to Mr Ciarán Mooney; Dr Cuan Harrington; Mr Dermot O'Flynn; Prof Fanus Dreyer; Dr Juventine Asingei; Dr Osmond Morris; Ms Sophie Jang; and Sage Foundation.

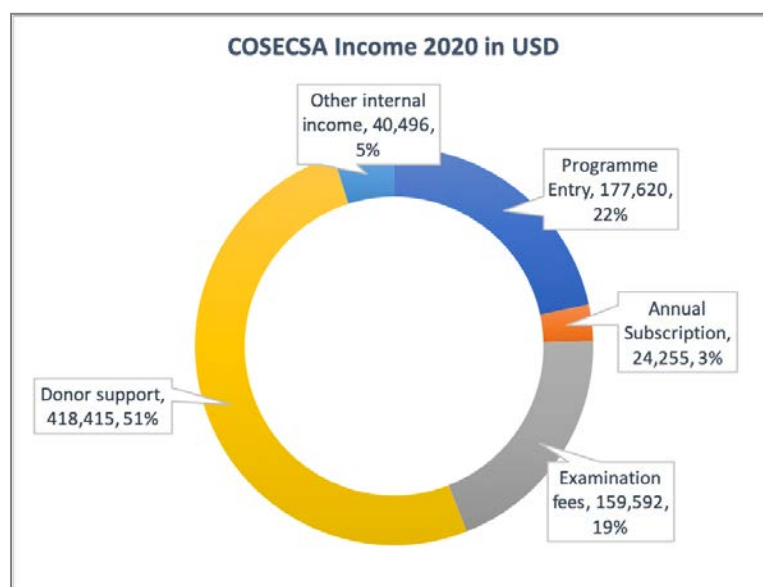
Achievements

Outcome 1: COSECSA will have the capacity to meet complex financial management and reporting commitments, achieve sustainable financing, and manage efficient operations across multiple countries.

Sustainable financing

Four years ago, when the CP wrote the proposal for the 2017-2020 programme, we projected COSECSA's income from all sources to reach \$692,000 by 2020.

Despite the challenges of the COVID-19 pandemic and the subsequent reduction in annual funding from Irish Aid, as of 31st December 2020, COSECSA had recorded income **of \$820,379 (+19%)**



Managing during COVID-19

In June 2020, Ms Stella Itungu was appointed to the role of Chief Operating Officer of COSECSA. The CP worked closely with the COO, the Secretariat team and the COSECSA Executive to ensure COSECSA's core business was delivered despite the pandemic.

COSECSA embraced online technology for its Executive and Council meetings in 2020. Although the opportunity to meet in person was missed, online meetings proved to be considerably cheaper to hold than regional, in-person meetings. COSECSA anticipates that when travel restrictions are lifted, some College meetings will continue to be held online.

COSECSA Strategic Plan 2021-2025

The CP worked closely with the COO, the Chair of the Finance and General-Purpose Committee, and the Secretary General in producing COSECSA's 2021-2025 Strategic Plan. Feedback from more than fifty external stakeholders was incorporated into the final plan published in December.

Under this plan, COSECSA expects to graduate an additional **800-1,000 surgeons by 2025**, bringing the total number of graduates to approx. 1,500. The expected cost is 1.28m USD per annum over five years, and the bulk of the costs will be met through COSECSA's internally generated income.

Outcome 2: COSECSA will have the capacity to conduct and disseminate multi-country research of regional policy relevance and engage systematically to shape policy and resource allocation in this area.

The COSECSA Journal

COSECSA's Journal, *the East and Central African Journal of Surgery*, is one of a handful of peer-reviewed journals that publishes articles in sub-Saharan Africa about surgery in sub-Saharan Africa. It is completely free for both authors and readers. It contributes to the professional capacity of surgery in the region and to the professional development of authors.

The journal has one full-time staff member, an Assistant Editor. The salary and operational costs of the journal have been covered by the CP for the past four years. The 27 members of the Editorial Board come from 13 countries, including two RCSI members, and all give their time free of charge. The journal is published online at journal.cosecsa.org.

All metrics relating to the journal improved significantly in 2020. This can be seen as reflective of the increased interest in global surgery and a conscious choice by authors, including many from outside the region, to publish in a journal based in the region.

	2019	2020	Change
Manuscripts received	67	105	+57%
Issues published	3	4	+33%
Website users journal.cosecsa.org	3292	8124	+147%

Research

The CP published two papers in the *World Journal of Surgery* this year, both of which were the result of collaborative research by authors in Ireland in the COSECSA region:

- Harrington, C.M., Jang, S.S., Mangaoang, D. et al. Integration and Sustainability of Electronic Surgical Logbooks in Sub-Saharan Africa. *World J Surg* (2020). <https://doi.org/10.1007/s00268-020-05613-z>
- Mooney, C., Tierney, S., O'Flynn, E. et al. Analysing the Operative Experience of Paediatric Surgical Trainees in Sub-Saharan Africa Using a Web-Based Logbook. *World J Surg* (2020). <https://doi.org/10.1007/s00268-020-05892-6>

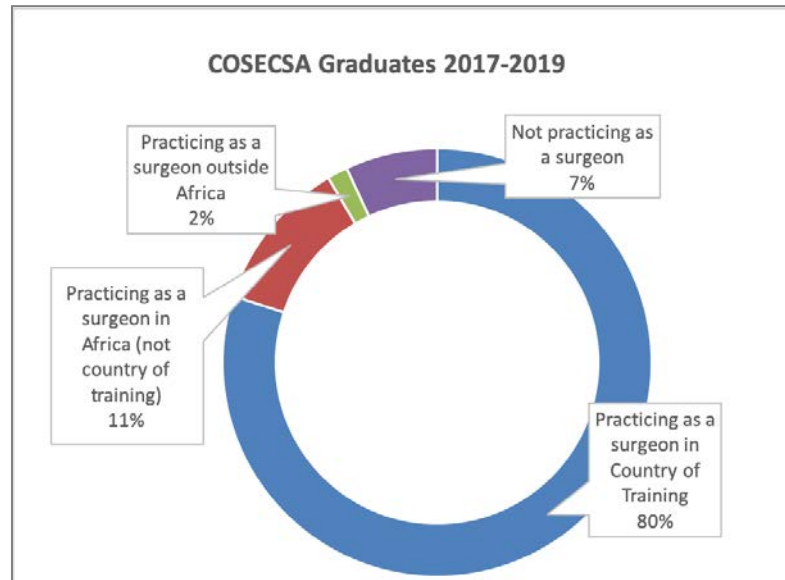
Additionally, the CP facilitated the setting up of a collaborative research team of surgical trainees and newly-qualified surgeons from Ireland, the UK, Ethiopia, Tanzania, Zambia and Zimbabwe. This team aims to undertake a repeat of the CP's 2016 study which analysed the specialist surgical workforce in sub-Saharan Africa. It is hoped that this new study will be able to quantify the impact of COSECSA, and indirectly the CP, on the size of the surgical workforce in the region after five years. The team hope to begin data collection in Q2 of 2021.

Outcome 3: COSECSA will engage its members, fellows, trainees and the wider surgical, medical and general public.

Retention of COSECSA surgeons

The CP conducted a retention survey of COSECSA surgeons who graduated in 2017, 2018 and 2019. 80% of the respondents were currently employed as surgeons in the country where they did their COSECSA training, typically their home country.

The majority of respondents, 91.5%, are working within Africa. Only 1.5% reported that they were working outside of Africa; this figure represents two graduates who were both working in the United Kingdom.



The survey also indicated that COSECSA graduates were supervising an average of five trainees. This points to the multiplier, or cascading impact of the training model supported by the CP.

First-person surgeon stories

With the outbreak of the pandemic, two COSECSA surgeons, Dr Benson Harrison Lyimo and Dr Tiyamike Chilunjika, shared their perspectives on the impact of COVID-19 in Tanzania and Malawi respectively, in first-person pieces for RCSI's internal staff network. Dr Lyimo had visited RCSI in February to be presented with the Gerald O'Sullivan medal as the top candidate in the 2019 COSECSA exams; this was one of the rare instances of CP-sponsored travel that occurred in 2020.²

In July, COSECSA surgeons, Dr Phyllis Kisa and Dr Mike Mwachiro from Uganda and Kenya respectively, were featured in *The Irish Times* for an article on the impact of the pandemic in East Africa.³

In December, RCSI Alumni office shared the story of the first successful separation of conjoined twins in Uganda in the alumni eNewsletter. The lead surgeon was Dr John Sekabira, a former Country Representative of COSECSA. Dr Phyllis Kisa was the Team Coordinator and four other COSECSA paediatrics surgeons were part of the effort.⁴

² <http://www.surgafrika.eu/blog/dr-benson-harrison-the-need-to-serve-people>

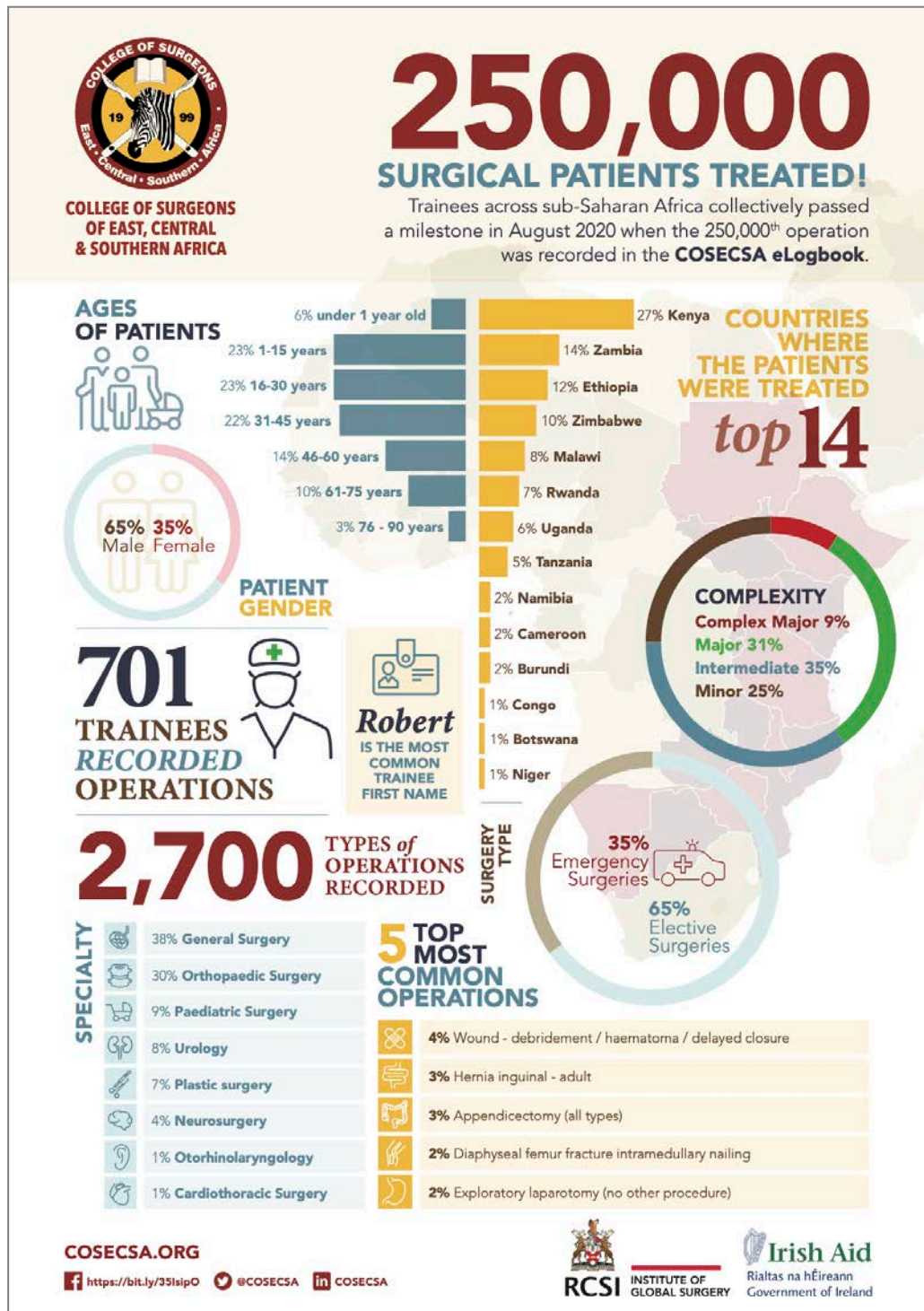
³ <https://www.irishtimes.com/life-and-style/health-family/africa-s-early-actions-helping-it-cope-with-coronavirus-1.4312715>

⁴ <https://royalcollegeofsurgeonsinireland.newsweaver.ie/eNews/vp3dqezyglywv1gew1a9dmj?email=true&lang=en&a=1&p=58606887&t=29784817>

250,000 surgical cases in the eLogbook

COSECSA trainees reached a special milestone in August when the 250,000th surgical case was recorded in the eLogbook.

The CP produced an infographic giving an overview of the cases. This infographic was well-received by many stakeholders in the COSECSA region and beyond.

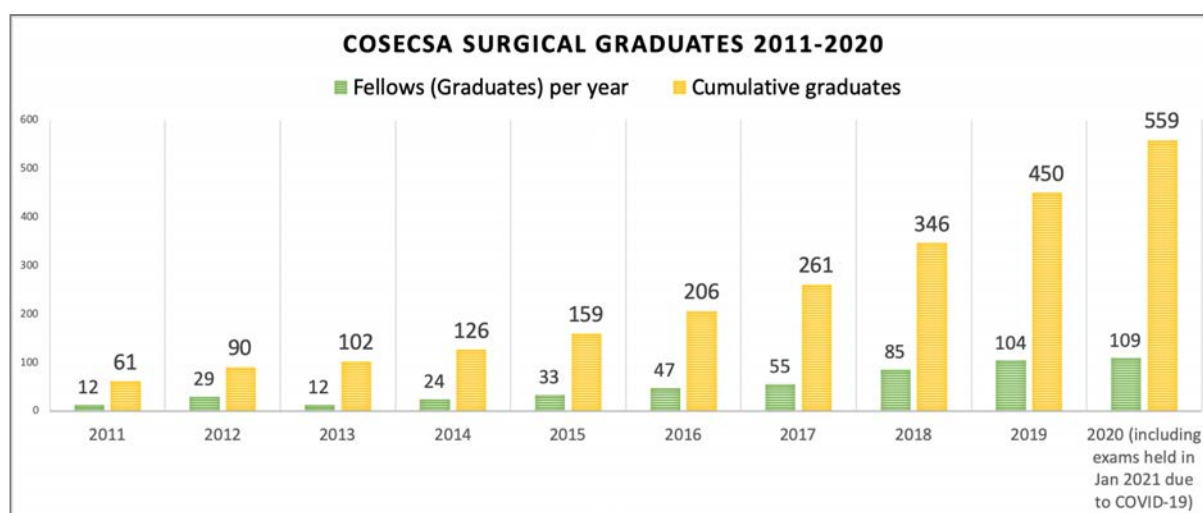


Outcome 4 Quality improvement processes will be embedded across all aspects of COSECSA training, examinations and accreditation.

Exam innovation

The declaration of the pandemic presented a massive logistical challenge to the holding of COSECSA's regional exams. COSECSA rose to the challenge and demonstrated huge capacity for innovation in converting the traditional three-hour written paper into an online format which was successfully delivered in each member country in September, and in keeping with local public health guidance. Simultaneously, an electronic grading system was introduced which allowed for much swifter processing of results from the COSECSA Secretariat in Arusha, Tanzania.

Rather than being held in one city over 2-3 days in early December, the clinical exams were spread out across seven countries and took place over six weekends in December 2020 and January 2021. COSECSA converted the clinical exams to a 'blended hybrid' format with both online stations and on-site stations, and a mix of online examiners and in-person examiners.



A record 124 candidates took the 'blended hybrid' Fellowship exams and 109 candidates passed, thus bringing the total number of COSECSA surgeons to 559. The pass rate of 88% is in line with previous years. COSECSA exceeded its top-line, five-year goal to graduate 500 surgeons by 2020. Additionally, a record 110 candidates took the Membership exam in December. 93 of these candidates passed and were eligible to begin Fellowship training in January 2021.

Exam quality assurance

Examiner exchange between RCSI and COSECSA has been a key reciprocal activity in the CP for many years. In February, prior to the declaration of the pandemic, the CP facilitated COSECSA's Chair of Education and Credentials committee, Prof Abebe Bekele to attend

the Fellowship in General Surgery exam held in Liverpool, UK⁵. Plans to have two COSECSA surgeons attend the Membership exams in RCSI in October had to be cancelled due to the ongoing travel restrictions.

Through RCSI's Digital and Engaged Learning team and RCSI's Simulation Centre, the CP was put in touch with Sage foundation who wished to support the CP as part of their corporate philanthropy. With the support of Sage, the CP developed an online training course in best practice for Examiners which covered topics such as the duties of an examiner and examiner behaviour, bias and unconscious bias in exams, and covered the format of both the Membership and the Fellowship exams. This course was hosted on COSECSA's eLearning platform, *schoolforsurgeons.net* and completed by 240 examiners from 50 countries prior to the clinical exams.

Optimising online resources

Aside from exams, online learning was a key area for COSECSA in 2020. The CP continued to support COSECSA's Basic Science course for trainees at Membership level and introduced a new, bespoke Research Methodology course for Fellowship level trainees. Both of these are hosted on *schoolforsurgeons.net*. A review of this eLearning platform is planned for Q1-2 2021.

The eLogbook *logbook.cosecsa.org* underwent significant new-feature developments in October 2020. These features make it easier for trainees to record their cases and view their overall cases, while improving the reporting and analytical functions for administrators. It is expected that the 300,000th case will be recorded in the eLogbook in May 2021.

In the next year, the CP plans to develop an app or offline version of the eLogbook. Survey data indicates that such a development will help trainees to circumvent internet connectivity challenges and lead to all a majority of trainees recording the majority-all of their cases.

Outcome 5 COSECSA will ensure that its fellows and other surgeons maintain and enhance the knowledge and skills needed to deliver a high quality surgical service in the region.

Blended courses for surgeons in practice

The delivery of in-person workshops and courses was severely hampered by the pandemic in 2020. However, easing of restrictions in the latter part of the year enabled Train-the-Trainer courses to take place in six countries. These courses were sponsored by the CP and SafeSurgery2020. The Train-the-Trainer course was developed as a blended course with an online curriculum shared by RCSI Institute of Leadership and hosted on *schoolforsurgeons.net*.

⁵ Fellowship exams for the four Royal Colleges of Surgeons (Ireland, England, Glasgow and Edinburgh) are held in different locations in UK and Ireland each year

The Basic Surgical Skills course was also developed as a blended learning course. COSECSA recorded videos of skills training at an accredited hospital in Kenya and published these along with a sample workshop curriculum on *schoolforsurgeons.net*.

Train the Trainer courses delivered in:	Basic Surgical Skills courses delivered in:
Burundi	Ethiopia
Kenya	Gabon
Mozambique	Kenya
Namibia	Malawi
Tanzania	Mozambique
Rwanda	Niger
	Rwanda
	Zambia

Basic Surgical Skills workshops, sponsored by the CP, were held in accredited COSECSA hospitals in eight countries, including courses held in the Mobile Skills Unit which is stationed at Maputo Central Hospital, in Mozambique (*pictured below*). This unit was donated by RCSI to COSECSA in 2014.



Outcome 6 COSECSA will reach out to surgically underserved communities through strategic partnerships with, and support for, colleges of allied healthcare practitioners, and allied surgical care staff.

Building the Anaesthesia workforce

The CP was delighted to join with two new partners, CAI and CANECSA, to begin the Building Anaesthesia Workforce project under a funding agreement signed with Irish Aid in November 2019. Work began in earnest in January 2020 and despite the challenges of initiating a new project during a global pandemic, the project had achieved significant progress on all six of its first-year objectives by the end of November 2020.⁶

The Anaesthesia project was not able to hold any in-person events during the year due to the pandemic. Therefore, the Examiner Training workshop, Train the Trainers course; and Governance group meeting were held in an online format instead. This resulted in a lower than anticipated spend in this project and the subsequent submission of a repurposement request in January 2021.

Some highlights of the first year of this pilot project are:

- The basic administration, staffing, tools, processes and means of communication of the College are now established.
- CANECSA's first staff member, Ms Sophia Masuka, Administration Officer has been appointed. She works alongside the COSECSA Secretariat team in Arusha, Tanzania and is being managed by the COSECSA COO.
- CANECSA's eLearning platform, *learn.canecsa.com* has been established and the training curriculum has been published.
- Training of the first cohort of examiners and trainers has been undertaken, with material in place for the first cohort of trainees.
- 35 candidates took the first MCA and FCA CANECSA examinations held in October. These were the first ever multi-country anaesthesiology examinations in the region.
- The clinical/written examinations were held on 20th January 2020.
- 70 candidates have enrolled for the first year of formal CANECSA training.
- The situational analysis of the anaesthesia workforce in the region was completed and is being prepared for publication.

For the 2021-2024 period, the Anaesthesia project will be fully integrated into the CP, but will retain a separate steering group, reflective of the four main organisations engaged in this project.

⁶ As per the separate funding agreement for this project, an Annual Report was submitted to Irish Aid on 14th December 2020.

Challenges

The declaration of the COVID-19 pandemic in March presented challenges to the delivery of the CP workplan in 2020. The table below highlights the activities which were most impacted, and the resolution.

Planned activity	Impact of COVID-19	Resolution
Staff exchange visits to enhance knowledge of eLearning platform, IT portfolio and management of the exams processes	No visits of COSECSA staff to RCSI, or RCSI staff to COSECSA took place in 2020	The eLearning and exams projects were successfully completed by remote means
Visit of new COO to RCSI to meet partner organisation		In-person visits are considered an important activity for increasing understanding between partners and the wider organisations. These will resume once safe to do so
Visit of Steering Committee members to region		
Evaluation of the EST (Essential Skills Training) courses which took place in Rwanda and Zimbabwe 2017-2020, to inform the design of future EST programmes	This evaluation did not take place as travel to the countries was not possible and stakeholders were engaged with responding to the pandemic	The CP will work with an independent consultant on a voluntary basis to carry out this evaluation through remote means in 2021
Meeting of the COSECSA Institutional Research Board to further develop research infrastructure, support by a Research Ethics expert from RCSI	This meeting did not occur due to travel restrictions	The COSECSA IRB conducted business online during the year and successfully renewed its licence from the United States Department of Health and Human Services for a further 3-year term
		Activities to support and strengthen research are included in the 2021-2024 workplan
Media visit to promote awareness of the impact of Irish Aid in Irish media	Plans to conduct a trip with Irish media were cancelled due to travel restrictions	The CP facilitated COSECSA surgeons to give interviews to Irish mainstream and medical media and for COSECSA Council members and the COO to speak at webinars
Development of CPD portfolio and CPD courses	Research was conducted on CPD provision but due to the	The COSECSA Strategic Plan 2021-2025 and the

need to prioritise training and exams during the pandemic, this activity was postponed

CP workplan 2021-2024 have provision to develop CPD courses

The next phase of the partnership

The twin goals for the CP from 2017-2020 have been largely achieved:

- Goal 1: Ensure the financial and operational sustainability of COSECSA.
- Goal 2: Ensure the quality of the COSECSA training, examination and accreditation model, and enhance the quality of surgical care practice in the region.

The overall goal for the CP for the 2021-2024 phase is

To achieve better-quality surgical care for more patients in sub-Saharan Africa.

In 2020, the CP successfully integrated two new partners into the programme in order to begin work to build the anaesthesia workforce in the region. Despite the first year of this project coinciding with the pandemic and the subsequent cancellation of planned in-person meetings and workshops, the project achieved its goals and enters 2021 in a very healthy position.

The CP fundamentally believes that there can be no safe surgery without safe anaesthesia. But there also has to be safe perioperative nursing and safe obstetric and gynaecological care to provide the full spectrum of high-quality surgical care to patients. In the next four years, the CP plans to work with other professional bodies to support the development of the theatre and anaesthetic nursing workforce, and the obstetrics/gynaecology workforce in the region. We believe that our 2021-2024 workplan aligns closely with the goals of *A Better World*.

The activities which the CP plans to carry out in 2021 are *not* dependent on the volume of surgery being performed – which is likely to fluctuate until COVID-19 is under control. Rather, they are “behind-the-scenes” activities that are vital for strengthening the COSECSA and CANECSA training programmes, and for increasing the quality of care being delivered to patients. This was the intention of the CP prior to the pandemic, but is even more appropriate now.

The CP is now an integral part of the RCSI IGS, while retaining close links with RCSI’s Department of Surgical Affairs. This gives the CP ready access to a network of expertise and resources.

Conclusion

Having come through 2020, it is clear that COSECSA has emerged from its start-up phase. The innovation and capacity the College demonstrated to not only continue its core business of training but to increase income diversity; successfully deliver online examinations; and publish a strategic plan is extremely commendable.

COSECSA's ability to surmount challenges in 2020 can be attributed in part to the CP's model of partnership over the past 13 years. This model has fostered a long-term investment in governance, in organisational capacity, in lean and online systems, and in staff development. RCSI has also benefitted from the knowledge and learnings of working in sub-Saharan Africa; the IGS is applying the experience and proven model to initiate new projects with new partners.

The real impact of this CP has been on patients in sub-Saharan Africa. With 559 graduates, and an estimated retention rate of just under 92% within Africa, COSECSA surgeons will treat thousands of patients over the course of their careers. They will also supervise junior surgeons, carry out research, take part in examining, and engage in continual professional development. All these activities improve the overall quality of surgical care to patients in the region.

Over the past 13 years, RCSI and COSECSA have developed a strong working partnership. We recognise that there is still a degree of uncertainty due to the pandemic, but feel fortunate to have a strong foundation, and to have the full support of our respective communities. We also have the full support of our new partners, CAI and CANECSA. The CP is very proud to have been supported financially by Irish Aid since 2007 and hope to continue this relationship into the future.

Appendix I CP Steering Committee

Title	First Name	Surname	Partner
Prof	Abebe	Bekele	COSECESA
Prof	Eric	Borgstein	COSECESA
Prof	Camilla	Carroll	RCSI
Dr	Patricia	Eadie	RCSI
Prof	Krikor	Erzingatsian	COSECESA
Dr	Jane	Fualal	COSECESA
Mr	James	Geraghty	RCSI
Prof	Godfrey	Muguti	COSECESA
Dr	Wakisa	Mulwafu	COSECESA
Dr	Samwel	Nungu	COSECESA
Mr	Denis	Robson	co-opted
Mr	Kieran	Ryan	RCSI
Prof	Mark	Shrime	RCSI
Prof	Sean	Tierney	RCSI
Prof	Russ	White	COSECESA

Appendix II CP Financial Returns 2020

Collaborative Activity Area		Budget		Expended 31-Dec 2020		Closing Balance 31-Dec 2020 ⁷	
1	Management strengthening	€	44,892	€	44,892	€	-
2	Research and policy	€	34,030	€	32,030	€	2,000
3	Engagement and communications	€	4,500	€	3,800	€	700
4	Quality improvement in training, examinations and accreditation	€	56,662	€	57,207	€	(545)
5	In-service training for surgeons	€	18,250	€	10,250	€	8,000
6	Support for allied healthcare practitioners and allied surgical care staff	€	104,000	€	70,045	€	33,955
7	Programme Administration	€	30,866	€	24,100	€	6,766
8	Programme Management	€	121,800	€	97,758	€	24,042
		€	415,000	€	340,082	€	74,918

⁷ These figures are provisional; the annual external audit of the CP account will take place in Q1 2021. The auditor's report and final balances will be shared with Irish Aid when complete.

Appendix III Results Framework: RCSI/COSECSA CP 2017-2020

Programme Goal	<p>The Collaboration Programme (CP) had two goals for the final, four-year period (2017-2020) of its mandate</p> <ul style="list-style-type: none"> a) Ensure the financial and operational sustainability of COSECSA b) Ensure the quality of the COSECSA training, examination and accreditation model, and enhance the quality of surgical care practise in the region
Intended Impact ^[2]	<p>Intended Impact = Better quality surgery accessible to more patients in Sub-Saharan Africa</p> <p>The partners in the CP are RCSI and COSECSA (College of Surgeons of East, Central and Southern Africa):</p> <ul style="list-style-type: none"> • RCSI is an international not-for-profit health sciences institution, with its headquarters in Dublin, focused on education and research to drive improvements in human health worldwide. • COSECSA is a non-profit professional body whose mission is to promote excellence in surgical care, training and research in Sub-Saharan Africa. It is headquartered in Arusha, Tanzania and currently has 14 member-countries thus reaching a population of over 400 million people.
Overview of Progress	<p>COSECSA has grown to become the largest surgical training institution in the region. In 2006, the year prior to the beginning of the partnership, COSECSA graduated just seven Fellows, to have a cumulative total since inception of 17 graduates. In 2020, COSECSA graduated 109 Fellows bringing the cumulative total to 559. Latest available data shows the retention rate of COSECSA graduates in Africa is 91.5%.</p> <p>The declaration of the COVID-19 pandemic in March 2020 cast uncertainty over many projects as all upcoming CP-related travel, and in-person events were immediately put on hold. Despite the challenges presented by the pandemic, there were also many highlights during the year. Chief among these were the successful first year of the Building the Anaesthesia workforce project and the integration of two new partners: CAI and CANECSA (see 6.2)</p> <p>Having come through 2020, it is clear that COSECSA has emerged from its 'start-up' phase. The innovation the College demonstrated to not only continue its core business of training but to increase income and move towards financial sustainability; successfully deliver online examinations; and publish a strategic plan is extremely commendable.</p> <p>COSECSA's ability to surmount challenges in 2020 can be attributed in part to the CP's model of partnership over the past 13 years. This model has fostered a long-term investment in governance, in organisational capacity, in lean and online systems, and in staff development. The CP believes that the goals set out for the 2017-2020 period have been largely achieved. Our focus for the next four years is now on working with our partners to achieve better-quality surgical care for more patients in sub-Saharan Africa.</p>

Objectives	Outcomes / Outputs	Key Result Indicators	Baseline data and source (2016)	Target 2017	Target 2018	Target 2019	Target 2020	On/off track ^[4]
<i>1) COSECSA will have the capacity to meet complex financial management and reporting commitments, achieve sustainable financing, and manage efficient operations across multiple countries</i>	COSECSA will have the financial management and reporting system appropriate to an increasingly complex work plan and partnership environment	COSECSA will produce high quality financial reporting	No dedicated Financial staff in place in COSECSA COSECSA accounting is managed by ECSA- HC (East, Central and Southern Africa Health Community)	A Finance Officer is recruited COSECSA manages own accounting	Finance Officer is twinned with RCSI financial staff member; twinning visit takes place Financial reporting is produced on time and fully satisfies regulatory and donor requirements	Financial staff twinning visit takes place Financial reporting is produced on time and fully satisfies regulatory and donor requirements	Financial reporting is produced on time and fully satisfies regulatory & donor requirements	
	A structure will be developed for systematic interaction between the secretariat and national offices	Country Coordinators are recruited in member countries to support information flow	8 Country Coordinators recruited	ToRs for Country Coordinators developed	Regular reports are received from each member country	Regular reports are received from each member country	Regular reports are received from each member country	
	Ensure that capacity is in place in COSECSA to build strategic relationships at both national and regional levels to assure	A Political Engagement strategy is developed COSECSA's third party funding (other donors and	Political engagement is ad hoc and not documented COSECSA receives \$19,000 from	TOR for Public Finance Management consultant drawn up. COSECSA receives	Political Engagement strategy is prepared Public finance support from member country governments reaches \$10,000	Public finance support from member country governments reaches \$20,000 COSECSA receives \$170,000 from third	Public finance support from member country governments reaches \$30,000 COSECSA receives \$220,000 from	

	long term financial stability	member country governments) increases as % of income	third party donors COSECSA is not in receipt of any public finance from member country governments	\$90,000 from third party donors	COSECSA receives \$120,000 from third party donors	party donors	third party donors	
	Obtain an understanding of the holistic capacity of COSECSA, and areas to be strengthened	Mid-point review of COSECSA's five-year strategy takes place Theory of change methodology explains the process by which COSECSA and CP activities contribute to improved regional health outcomes	No Theory of change articulated	-	Mid-point review of COSECSA's five-year strategy (2016-2020) takes place Theory of change produced and published Review of COSECSA Corporate Governance structure undertaken COSECSA risk matrix developed	External, objective business assessment identifies internal and external factors in planning for COSECSA's next phase of development	Assistance provided to COSECSA to produce 2021-2026 Strategic Plan (if requested)	
	High quality management tools and processes	Hosting and support of the entire COSECSA IT portfolio will	COSECSA IT portfolio mostly managed by	Mapping of hosting and support of COSECSA's IT portfolio	Monthly recurring IT costs will be paid directly by COSECSA	The COSECSA IT portfolio is mostly managed by COSECSA	The COSECSA IT portfolio is mostly managed by COSECSA	

		be contracted, managed and paid by the COECSA Secretariat	RCSI	is undertaken				
Analysis: These outcomes are largely fulfilled. COECSA's income in 2020 was 19% above predicted levels following agreements with new partners and successful internal income generation. The CP assisted in the development of COECSA's Strategic Plan (published Dec 2020).								
2) <i>COECSA will have the capacity to conduct and disseminate multi-country research of regional policy relevance and engage systematically to shape policy and resource allocation in this area</i>	COECSA will have the capacity to undertake multi- country research	COECSA Institutional Review Board and research administration processes established	No IRB in place; COECSA is engaged in some research activity	COECSA IRB is registered with US Department of Health & Human Services Office for Human Research Protections	COECSA IRB holds annual seminar COECSA IRB develops TOR COECSA publishes a Research Statement	COECSA has processes and capacity in place to manage research & data access requests in secure and efficient manner; informed by international best practice COECSA tracks research activity involving COECSA data from inception to dissemination of findings	COECSA proactively engages in high-quality multi-country research	
	COECSA's ECAJS journal will be produced and published in accordance with international best practice	Implementation of content management software and online article submission for ECAJS	ECAJS is produced as pdf document twice in 2016	Assistant Editor with experience in Open Journal Systems is recruited and providing technical support	ECAJS journal produced 3 times annually Open Journal System is available for authors and reviewers	ECAJS journal produced 3 times annually	ECAJS journal produced 3 times annually ECAJS articles are indexed in Pub Med Central	

	Measurement of the effect of the COSECSA model on health outcomes in the region	Identification of appropriate and practical measures by which the impact of COSECSA on healthcare in the region can be measured	Collaboration Programme and COSECSA produce surgical workforce map	Collaboration Programme and COSECSA measure retention rates of locally-trained surgeons in region	Collaboration Programme supports 4 trainees to conduct studies on the impact of COSECSA on healthcare in the region	Collaboration Programme supports 4 trainees to conduct studies on the impact of COSECSA on healthcare in the region	COSECSA authors and collaborates with others to produce evidence-based data on surgical disease patterns, operative caseloads, patient demographics	
	Constructive engagement in advocacy and policy development for quality surgical care	COSECSA demonstration of added value to ministers of health in minuted meetings. CP meetings with all Irish embassies in the region	COSECSA has contact with all Health Ministries in the region As of 2017, 7 countries in COSECSA region host Irish Embassies	COSECSA has minuted meetings with 3 Health Ministries CP meets with 1 Embassies in the region	COSECSA has minuted meetings with 3 Health Ministries CP meets with 2 Embassies in the region	COSECSA has minuted meetings with 3 Health Ministries CP meets with 2 Embassies in the region	COSECSA has minuted meetings with 3 Health Ministries CP meets with 2 Embassies in the region	
Analysis: Due to the pandemic, regional travel and in-person meetings did not go ahead as planned. COSECSA's 2021-2025 strategy includes a plan for dialogue with Ministries of Health in the region through working with national surgical societies and COSECSA Council members in each country. In lieu of embassy visits, copies of the CP's book "Operating Together: 12 Years of Collaboration Between RCSI and COSECSA" and country-specific factsheets were sent to Irish embassies in all COSECSA member countries.								
3) <i>COSECSA</i>	The professional network of	Coherent promotion of COSECSA's	\$11,000 income from Members and	\$15,000 income from Members	COSECSA's benefits package for members and fellows	Benefits package is revised and promoted to	\$18,000 income from Members and Fellows	

<i>will engage its members, fellows, trainees and the wider surgical, medical and general public</i>	COSECSA members and fellows will be engaged	offering to its members and fellows	Fellows fees annual subscriptions and election fees	and Fellows fees annual subscriptions and election fees	is benchmarked against best practice \$16,000 income from Members and Fellows fees annual subscriptions and election fees	members and fellows \$17,000 income from Members and Fellows fees annual subscriptions and election fees	fees annual subscriptions and election fees	
	A comprehensive support structure will be put in place to address gender diversity	Mentoring programme for trainee female surgeons established	Women in Surgery Africa (WiSA) is founded	Mentoring programme in place, managed by WiSA with support of CP	Mentoring programme in place, managed by WiSA with support of CP	Mentoring programme in place, managed by WiSA with support of COSECSA Secretariat	Mentoring programme in place, managed by WiSA with support of COSECSA Secretariat	
	COSECSA will produce consistent, appropriate, professional branding and communications	Coherent, professional promotion of COSECSA training, examination and accreditation model	COSECSA E-Newsletter produced by Secretariat and sent 8 times a year	Website updated in timely manner E-Newsletter produced by Secretariat and sent 6 times a year	E-Newsletter produced by Secretariat and sent 6 times a year COSECSA flyers are updated and distributed at appropriate fora COSECSA posters are updated and distributed to accredited training hospitals COSECSA website is redesigned in-house and reflects growing range of	COSECSA Communications Strategy is produced covering internal and external communications priorities E-Newsletter produced by Secretariat and sent 4-6 times a year COSECSA flyers are updated and distributed at appropriate fora	E-Newsletter produced by Secretariat and sent 4-6 times a year COSECSA flyers are updated and distributed at appropriate fora	

					activities			
	The Collaboration Programme will produce consistent, appropriate, professional communications	Coherent, professional promotion of work and achievements of Collaboration Programme	1 x national media press feature 1 x national radio interview 1 x medical media coverage	1 x national media coverage 2 x medical media coverage	1 x international media coverage 1 x national media coverage 2 x medical/niche media coverage	1 x international media coverage 1 x national media coverage 1 x medical/niche media coverage	1 x international media coverage 1 x national media coverage 1 x medical/niche media coverage	
Analysis: Plans for a media trip to a COSECSA training hospital with Irish journalists were cancelled due to COVID-19. However, first-person pieces from COSECSA surgeons were shared in national and medical media in Ireland to maintain coverage. The CP and COSECSA both increased social media reach.								
4) Quality improvement processes will be embedded across all aspects of COSECSA training, examination and accreditation	A process of regular review of COSECSA curricula will be embedded	At least one cycle of curriculum review will be carried out during the programme period	No curriculum review meetings held	1 Curriculum Review Meeting held, with support from RCSI	1 Curriculum Review Meeting held, with support from RCSI	COSECSA publishes new/revised curricula for 1 x Membership training programme and 2 x Fellowship training programmes	COSECSA publishes new/revised curricula for 3 x Fellowship training programmes	
	The training experience will be tracked, analysed and standardised	Evidence will be generated documenting training experience in each active COSECSA training	Benchmarking of COSECSA Training Post Assessment forms against international comparator	Form revised and launched online according to best international	Collaboration Programme analyses trainee operative experience through Logbooks and Post Assessment Forms	COSECSA authors evidence-based study on variables relating to training surgeons in LMICs	-	

	hospital	conducted	practice				
High quality exams processes	An average of at least two examiners will travel to examine (or undergo examiner training) in the other College's examinations each year	2 Examiners exchange between colleges (4 people) each year	2 Examiners from COSECSA travelled to RCSI exams; 3 Examiners from RCSI travelled to COSECSA exams	2 Examiners from COSECSA travel to RCSI exams; 2 Examiners from RCSI travel to COSECSA exams 1 x OSCE (Objective Standardised Clinical Exam) question writing workshop held Collaboration Programme produce feasibility study on creating two COSECSA exam centres	2 Examiners from COSECSA travel to RCSI exams; 2 Examiners from RCSI travel to COSECSA exams	2 Examiners from COSECSA travel to RCSI exams; 2 Examiners from RCSI travel to COSECSA exams	
High quality hospital accreditation processes	The COSECSA training hospital accreditation process is benchmarked against international best practice	Paper based accreditation process	Online hospital accreditation process is implemented	Gap analysis of the COSECSA hospital accreditation process against best practice is conducted	COSECSA has a nominated Programme Director in every accredited hospital		
Analysis: Although no examiners could travel from COSECSA to RCSI and from RCSI to COSECSA in 2020 due to COVID-19, the CP provided support to COSECSA to convert the written and clinical exams to a online and hybrid online/on-site format. Additionally, the CP developed an online Examiner Training course. COSECSA examined a record number of candidates and 109 new Fellows graduated as specialist surgeons in 2020.							

<p>5) <i>COSECSA will ensure that its fellows and other surgeons maintain and enhance the knowledge and skills needed to deliver a high quality surgical service in the region</i></p>	COSECSA surgeons will be equipped with leadership skills needed to most effectively perform their clinical and institutional leadership roles	Leadership training will be delivered to at least 100 surgeons	22 Master Trainers 186 COSECSA accredited trainers	-	15 surgeons will receive Leadership training, incorporated into the Train the Trainer programme	15 surgeons will receive Leadership training, incorporated into the Train the Trainer programme Train the trainer courses will be held in 6 countries reaching 84 surgeons in total (6 x 14)	Train the trainer courses will be held in 6 countries reaching 84 surgeons in total (6 x 14)	
	COSECSA surgeons will be equipped with the skills and tools to effectively deliver research methodology training	At least 10 research methodology courses will take place during the Programme period	Research methodology courses available on an ad-hoc basis	-	Online research methodology course informed by international best practice and curated for COSECSA region is published on schoolforsurgeons.net as optional module	Online research Methodology course becomes mandatory as part of training curriculum	70% of trainees complete course	
	Sustainable systems will be in place to support COSECSA surgeons to deliver basic science courses	An active cadre of basic scientists will be in place in each COSECSA country	CP trained COSECSA basic science cadre delivering short courses throughout the region – though unequal distribution of		Online basic science course is created, informed by international best practice Monthly course content published on schoolforsurgeons.net and rolled out from	50% of trainees complete course	70% of trainees complete course	

			courses		Q2			
	Formalise and record continuous professional development (CPD) for trained cadres of surgeons	Demonstrable COSECSA engagement with national medical councils on CPD for surgeons	COSECSA not accredited as a provider of CPD points for events	Registered as a CPD provider in 4 countries	Registered as a CPD provider in 6 countries		A CPD e-portfolio will be created or adapted for COSECSA region	
Analysis: Due to the need to prioritise training and exams and the demands of COVID-19, the development of the CPD courses has been postponed until the 2021-2024 iteration of the CP. Data from the graduate survey conducted in 2020 gives a strong foundation for the development of CPD courses in the region: over 90% of qualified surgeons indicated they wished to undertake further professional certification in the next five years.								
6) COSECESA will reach out to surgically underserved communities through strategic partnerships with, and support for, colleges of allied healthcare providers, and allied surgical care staff	Access to quality surgical care will increase through increased number of rural medical officers trained in basic surgery	At least 60 general medical officers to receive EST training in Rwanda and Zimbabwe	4 EST Courses held in Zimbabwe 6 EST courses held in Rwanda	4 EST courses held in Rwanda	4 EST courses held in the region	4 EST courses held in the region	A review of the EST programme in Rwanda and Zimbabwe will be conducted	
	Strategic partnerships will be built with, and support supplied for, allied colleges, particularly anaesthesia (CANECSA) and also OBS/GYN	Intercollegiate collaboration between COSECSA and allied ECSA Colleges. Building the Anaesthesia	Regular contact between COSECSA and allied ECSA Colleges at meetings and events. No formal strategic	Regular contact between COSECSA and allied ECSA Colleges at meetings and events in region	Regular contact between COSECSA and allied ECSA Colleges at meetings and events in region	Regular contact between COSECSA and allied ECSA Colleges at meetings and events in region	Progress is notable in each of the 6 areas of the Building the Anaesthesia Workforce project: Training sites	

	(ECSACOG) and OR Nursing (ECSACON)	workforce	partnerships				selected Online e-learning platform developed CANECSA Admin Officer recruited Database of anaesthesiologists created Training curriculum available Exam format produced	
	Interdisciplinary training will be conducted	Piloting Quality and Process Improvement in Operating Theatres in Sub-Saharan Africa for Better Patient Outcomes					2 pilot sites are selected Training takes place in Dublin for multidisciplinary teams Both sites launch Quality interventions with support from RCSI Quality and Process Improvement	

							Centre	
<p>Analysis: Due to travel restrictions and the need to prioritise training and exams, the EST review was not carried out in 2020 as planned. An independent consultant will undertake the EST review in early 2021.</p> <p>The Anaesthesia project achieved its objectives in 2020 despite the pandemic.</p> <p>QI Projects at both hospital sites selected for QPOT were suspended as resources were diverted to dealing with the pandemic. The visits of the project manager and Quality Improvement expert from RCSI to both sites were cancelled. In 2021, the CP will work with the team in Tanzania to prepare a case study of the impact of COVID-19 on the operating theatre. The CP will explore development of an online QPOT course for multidisciplinary teams.</p>								