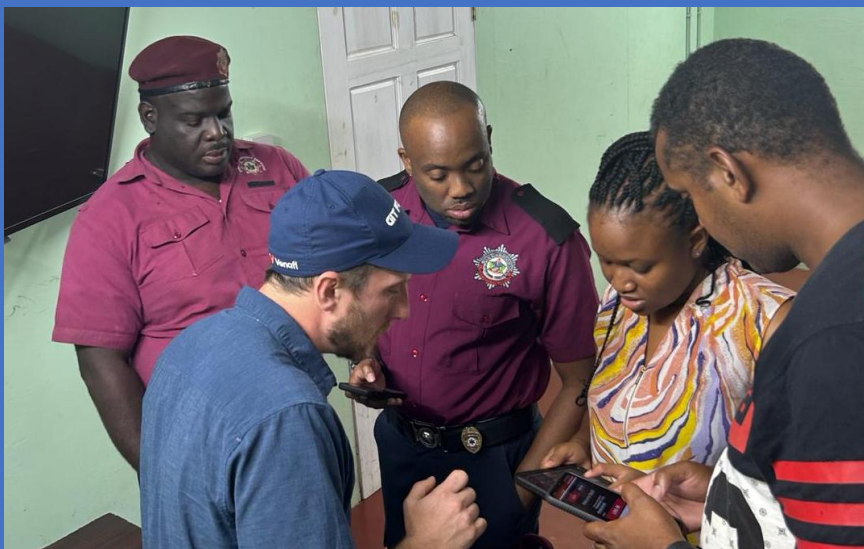




TECHIES WITHOUT BORDERS

Annual Report 2024



IT Volunteer Brad Anderson training the St. Lucia Fire and EMS Teams

Message from Manoj Thomas, President



CMES remains at the heart of TWB's mission, which has evolved over the past decade through technological advancements, auxiliary programs, and strong community engagement.

In 2024, TWB volunteers worked diligently to develop the third evolution of CMES technology — transitioning from USBs to Raspberry Pis, and now to CMES-minicomputer. Our solutions remain cost-efficient, scalable, and sustainable, providing healthcare practitioners with evidence-based, up-to-date resources at the point of care. The latest iteration supports high-definition video and images, and more powerful information search and retrieval functions requested by our users.

Through auxiliary programs, TWB remains steadfast in its mission to provide sustained, inclusive, and equitable opportunities to access and create medical knowledge. Our customizable Continuing Professional Development (CPD) Toolkit empowers policymakers to establish standardized, country-specific training frameworks.

Community engagement remains a driving force behind TWB's impact. Through initiatives such as monthly Q&A sessions, virtual journal clubs, and a thriving WhatsApp network of over 850 practitioners across 50+ global clinics, we continue to foster high levels of collaboration and knowledge exchange.

I am very proud of the significant strides TWB has made in advancing healthcare in underserved regions. None of this would be possible without the dedication, expertise, and unwavering commitment of our volunteers. In 2024 alone, we welcomed 15 highly qualified professionals into our ranks!

In a divided world, TWB remains committed to driving meaningful change. Every dollar from our generous donors fuels our work, and we are deeply grateful for your contributions. The generosity of humankind empowers us to continue transforming healthcare in underserved, resource-limited regions globally.

Stay connected with us on LinkedIn and Facebook for regular updates.

Sincerely,

A handwritten signature in black ink that reads "Manoj Thomas". The signature is written in a cursive, flowing style.

Statement from Jennifer Borneman, CFO



As in prior years Techies without Borders finished in a strong financial position, due to minimal administrative expenses in the current year. Fundraising efforts and in-kind donations brought in over \$22,000 contributing to our highest grossing year thanks to the support of our generous donors. The funds raised will be used to upgrade existing sites from CMES-Pi devices to minicomputers in the Gambia and Nigeria.

TWB non-profit corporation remains rated as a Platinum Level member on GuideStar-Candid platform, which is the highest Seal of Transparency.

Subscriptions and administrative costs were kept under \$4,000 for the year. Our largest expenditure of \$5,000 was spent to rebuild the IT platform that delivers the medical education.

Continued volunteer support from IT professionals, doctors, financial consultants, nonprofit administrators, and professionals with a variety of skills has allowed TWB to keep administrative costs low.

It continues to be my pleasure to work with donors and the TWB teams to assure financial accuracy and security.

Warm regards,

A handwritten signature in black ink, appearing to read "Jennifer Borneman".

*Dr. Jess Pelletier training a doctor
at Edward Francis Small Teaching Hospital, the Gambia*

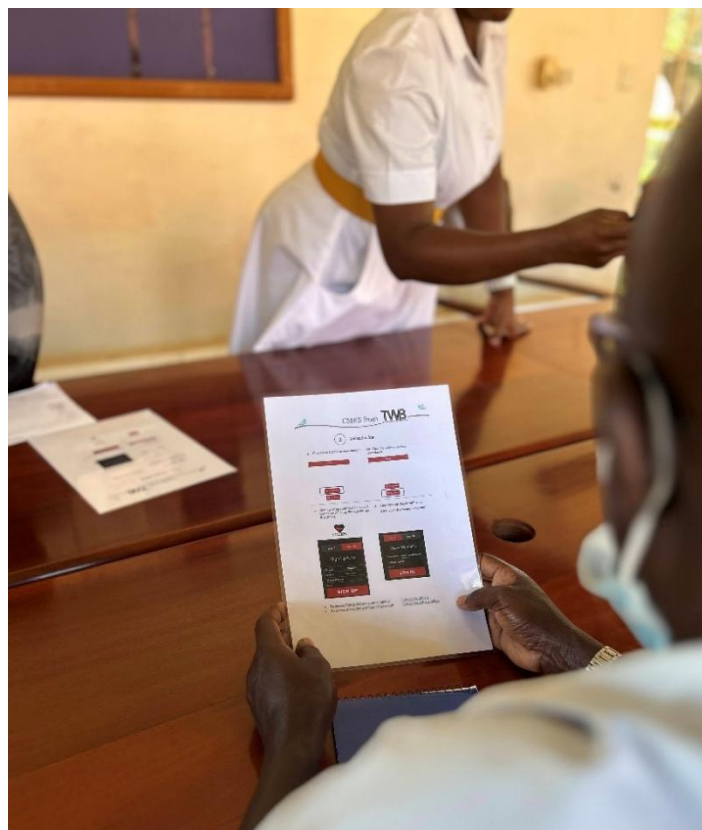
Impact in 2024: Better Tools. Better Training. Better Care.

IT Initiatives

- The CMES-Pi platform and app were redesigned for improved functionality and usability.
- A new mini-computer platform now supports video content, enhancing training for medical trainees.
- New partnerships expanded our cloud-based educational content to include EMS, ECG interpretation, dermatology, infectious diseases, point-of-care ultrasound, and virtual essential newborn care.



Showing the progression of the IT devices used, from USB to Raspberry-Pi to minicomputer



*Nurse's training on CMES
at Edward Francis Small Teaching Hospital, the Gambia*

Installations and Upgrades

Education Initiatives

- In Africa, we launched a monthly virtual Journal Club, board-review Q&As, and a Case of the Month.
- African medical residents contributed case studies, participated in CMES research, and received support for publishing their papers.
- In Oceania, we collaborated with Timor-Leste's Ministry of Health to establish a Continuous Professional Development department and foster a culture of lifelong learning for medical practitioners.
- Introduced ID4U - Infectious Disease Podcasts for Users of the CMES program to fill a gap in Infectious Disease content...

Installations

Katakwi General Hospital, located in Uganda's Eastern Region, is a government-owned facility serving a population of 213,000. Established in 2004, it provides essential maternity care, surgeries, and diagnostic services, despite being understaffed and underfunded.

In August 2024, a CMES-Pi, a small hand-sized computer, was installed in the clinic enabling medical staff access to up-to-date medical education via a Pi and smartphone app. This approach enhances patient care with minimal environmental impact, eliminating the need for travel and offering cost-effective, scalable, and renewable solutions.



Katakwi Hospital.



Hope Children's Centre

Hope Children's Centre in Busesa, Uganda, proudly serves a growing community of 211,000, offering life-saving outpatient care, immunizations, and free follow-ups at an affordable cost. In August 2024, the clinic enhanced its services with the addition of a CMES USB, shared among staff through a library-style loan system. This resource allows the team to access the latest medical knowledge, ensuring they can adapt care to available resources and provide the best possible treatment.

Upgrades

St Lucia Fire and EMS: Pi was upgraded with a new CMES-Pi device. Two training sessions were held for 22 Fire and EMS staff. Fire captains at nine stations received CMES training on the Pi and USB devices, with 14 additional USBs distributed for north and south stations as library loans for EMS staff.

Global CMES sites

Central and South

America

Guatemala
Honduras
Ecuador

Africa

Democratic Republic
of the Congo
Uganda
Nigeria
The Gambia



Caribbean

Antigua
Dominican Republic
St. Lucia

Oceania

Cook Islands
Fiji
Papua New Guinea
Samoa
Solomon Islands
Tonga
Tuvalu

Asia

Timor Leste
Nepal

CMES Initiatives

67 sites in 19 countries

13,000 medical providers enrolled

20+ million patient population served

What do CMES users listen to or read?

**The most downloaded podcasts and PDF files were
Imaging for Rib Fractures and Dengue Fever.**

New volunteers

This year, we had the privilege of welcoming 15 exceptional volunteers, each bringing invaluable expertise in medicine, administration, and IT, further strengthening our mission and impact.



**Mr. Joseph Cipolla,
BOD Member**



**Katja Crusius,
IT student at Claremont
Graduate University**



**Dinushika Gunawardena
Data Analyst/Researcher**



**Dr. Ranjita Raghaven,
Medical Education Assistant**



**Dr. Christine Knettel,
Medical Education Assistant**



**Makenna Hittner,
Medical Education Assistant**



**Dr. Matt Piechnik,
EMS Education Resource
Developer**



**Dr. Michaela Farrell,
Medical Education Assistant**



**Dr. Amy Bridges,
Medical Education Assistant**



**Dr. Rmaah Memon,
Medical Education Assistant**



**Dr. Connie Baluka,
Medical Education Assistant**



**Dr. Faith Ibu,
Medical Education Assistant**



**Fred Barton,
NP Nursing Education
Coordinator**



**Dr. Kamoga Dickenson,
CMES-ECHO Coordinator**



**Dr. Rebecca Asiimire,
CMES-ECHO Coordinator**

**Thank you for what you bring to the table,
may your coffee be strong.**

Total Volunteer Hours = 3758

Presentations & Publications

Dr. Jess Pelletier presented our CMES qualitative project at the Council of Residency Directors (CORD) conference in March. 2024.

Dinushika Gunawardena presented at the 2024 International Conference on Information Systems in Bangkok, Thailand on Dec. 15, 2024: CMES : "An Alternative to Technology Transfer for Human Development: An Epistemic Shift".

Maxwell N, **Pelletier J**, Boell S, Effa E, Otu A, Kitakule M, Li Y, Cloessner E, Hanson J. #150 A qualitative analysis of perceptions on a novel method of delivering Emergency Medicine Continuing Medical Education in Africa. Abstracts from African Conference of Emergency Care 2024. Gaborone, Botswana November 2024. African Journal of Emergency Medicine. 2024;14(4):277-498. doi:10.1016/j.afjem.2024.10.002

Cloessner E, Maxwell N, Mwenze B, Li Y, Thomas M, **Pelletier J**. #192 Fueling the learning fire: revitalizing Continuing Medical Education on Stick (CMES) Engagement via journal club. Abstracts from African Conference of Emergency Care 2024. Gaborone, Botswana November 2024. African Journal of Emergency Medicine. 2024;14(4):277-498. doi:10.1016/j.afjem.2024.10.002

Research

Congratulations to the lead author, Jessica Pelletier for our publication in Cureus: [Bridging Gaps: A Quality Improvement Project for the Continuing Medical Education on Stick \(CMES\) Program](#)

The research identified areas for improvement of the CMES database to better meet the educational needs of users.

Cloessner E, Effa E, Kitakule M, Otu AO, Bittaye S, Pelletier J. 511 Infectious Disease Podcasts for Users of the CMES Program. Annals of Emergency Medicine. 2024;84(4):S225. doi:10.1016/j.annemergmed.2024.08.501



Ly Cloessner, Nick Maxwell, Kakande Reagan, Jess Pelletier, Vera Sistenich at AfCEM24

CME Providers

These innovative and forward-thinking companies contributed their educational content to enhance resources for CMES participants.

New CME Providers



Dermatology: Black and Brown Skin allowed downloading of their book, *Mind the Gap: A handbook of clinical signs in Black and Brown Skin* to the CMES content platform.

Infectious Disease: **Febrile Podcasts** provided free open-access educational content about infectious diseases.



**LIFELINE EMS TRAINING
— AND CONSULTING —**

EMS: LifeLine EMS & Consulting provided their *Back to Basics* videos playing a key role in helping us launch CMES for EMS providers.

University of Washington, Seattle, WA: provided Virtual Essential Newborn Care (vENC), a mobile VR simulation program and app, enabling CMES participants to practice neonatal resuscitation and early newborn care.



CME Providers

We are forever grateful to Emergency Medicine Reviews and Perspectives (EM:RAP) who have been with us from the beginning and gift the bulk of our medical education content.



**Dr. Smith's
ECG Blog**



**Montgomery
County Hospital
District**



**Emergency
Medicine Cases**



**World Health
Organization**

AlfredHealth



**Don't Forget
The Bubbles**

Sponsors & Partners

Sponsors



We are grateful for the support from our new CMES sponsor Ruby For Good who rebuilt the Pi platform.

We are grateful for the continued support from our sponsors who expand their corporate horizons and help us bring medical education to the medical practitioners on the last mile.



Partners

We welcome our new partners in The Gambia : The Ministry of Health, Ocean Clinic, and Edward Francis Small Teaching Hospital; and in Uganda: Katakwi General Hospital and Hope Children's Clinic.



Ministry of Health
The Gambia



Edward Francis Small
Teaching Hospital,
The Gambia



Katakwi
General Hospital,
Uganda

