



Gateway To Ancient Chactemal



**GLOBAL
SURGICAL
EXPEDITION**

2025 IMPACT REPORT



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FROM THE EXECUTIVE DIRECTOR

In 2025, Global Surgical Expedition proved that surgical access can grow faster — and farther — when innovation and partnership work together.

What began in 2012 as a surgeon-led effort to deliver life-changing surgical care has evolved into something far greater: a scalable, innovative, and increasingly partner-driven model for expanding access to surgery worldwide. This year was defined by two forces working together, - **scale and innovation** - and by what becomes possible when they are intentionally aligned.

In 2025, GSE's **surgical impact** included **846 surgeries and over \$1.75 million in surgical care** for patients across Central America and Africa. Combined, GSE helped restore **1,240 quality-of-life years** to men, women, and children across the world. These numbers matter because behind each one is a

person whose health, dignity, and opportunity were restored.

Just as importantly, 2025 marked a shift in how impact is created. GSE deployed 16 surgical teams and conducted 39 provider training sessions, delivering robust, hands-on education across multiple regions. At the same time, we deployed powerful new tools — **including remote operating room mentoring, technology-enabled training platforms, and early integration of virtual reality surgical training systems** — allowing our surgeons to teach, guide, and support local teams far beyond the limits of travel alone. This dual approach is more effective, more sustainable, and capable of reaching far more patients than traditional mission-based models.

Across our partner sites, these investments are paying off. Local surgeons are increasingly performing complex procedures independently, using skills, systems, and confidence built through years of collaboration. This is how short-term

intervention becomes long-term access to surgical care for patients in need.

Behind the scenes, we also invested heavily in the future of the organization itself. We strengthened operations, professionalized systems, expanded leadership capacity, and welcomed new staff and board members — all to ensure that growth remains responsible and impact endures.

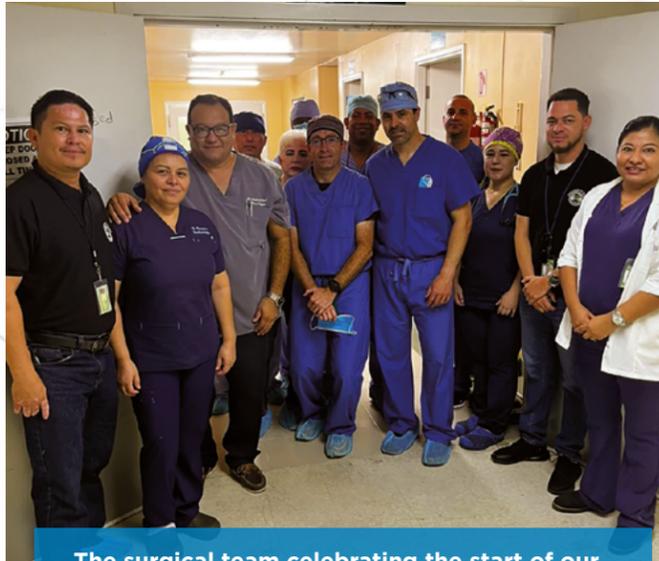
This report tells the story of a year when GSE didn't just do more — we did better. And together, with supporters like you, we are proving that access to safe, essential surgery can expand at scale thoughtfully, sustainably, and for the long term.

David E. Rapp, MD
Founder and Executive Director

GSE REPORT 2025



FROM LEARNERS TO LEADERS



The surgical team celebrating the start of our laparoscopic training partnership in 2023.



Two years later, Belizean surgeon Dr. Davila performing laparoscopic gallbladder removal – independently.

FROM TRAINING TO INDEPENDENCE

In 2025, Global Surgical Expedition reached a milestone years in the making.

For the first time, **surgeries performed independently by our trained partners exceeded those delivered through GSE's in-person surgical missions.** This moment represents a turning point — the realization of long-term investments in training, partnership, infrastructure, and measurement. It signals that GSE's impact is no longer limited by where our teams can physically travel, but is increasingly driven by the capacity we have built within local health systems.

This matters because sustainable surgical access is not defined by short bursts of care. It is defined by **year-round availability**, safer techniques, and the ability to treat more patients without waiting for visiting teams. When local providers are empowered to operate independently, patients receive care sooner, complications are reduced, and health systems become stronger and more resilient.

A powerful example of this model in action is GSE's **laparoscopic cholecystectomy program in Orange Walk, Belize.** What began nearly two years ago as

targeted training in a single procedure — gallbladder removal using minimally invasive techniques — was designed to solve a very real constraint: limited hospital bed capacity. By teaching laparoscopic surgery, patients no longer required overnight stays, recovery times were shorter, and complication rates were lower.

Today, surgeons in Orange Walk perform **over one hundred laparoscopic gallbladder surgeries annually on their own**, expanding access for those patients while simultaneously freeing resources so additional surgeries across other specialties can take place.

This is how GSE defines sustainability. We train with intention, invest for independence, and track outcomes so we can see — and share — what works. As partners take ownership of surgical care, impact multiplies far beyond what in-person missions alone could achieve. This foundation sets the stage for the innovations that follow, accelerating scale while preserving quality and accountability.

Education is how GSE builds the future of global surgery — intentionally, rigorously, and with purpose.

Global surgery education has historically fallen into two incomplete models: formal academic instruction without real-world experience, or short-term mission exposure without structured learning. **GSE's Global Surgery Scholar Program** was designed to bridge that gap. It is a comprehensive, novel training pathway that combines **six months of structured didactic education with supervised, hands-on experiential learning** — preparing participants not just to observe global surgery, but to practice it responsibly and sustainably.

Participants complete a six-month curriculum that blends online coursework, textbooks, and case-based learning, guided by experienced mentors through regular virtual classroom sessions. This foundation equips learners with a deep understanding of global surgical systems, sustainability, and health equity before they ever enter the operating room abroad.

That knowledge is then reinforced through an immersive, one-week international experience, where learners join GSE surgical teams in the field. Under close supervision, they witness how

sustainable global surgery functions in practice — from preoperative planning and intraoperative decision-making to postoperative care and partnership with local providers. This combination of preparation and experience is rare in global surgery education and is central to why the program is so effective.

In 2025, this approach continued to gain momentum. GSE partnered with leading academic institutions including **Penn State University, Virginia Commonwealth University,** and the **University of Virginia**, with additional partnerships underway. As demand has grown, GSE has begun planning to expand the program beyond residents and fellows, to include medical students and undergraduate learners who are interested in global health and humanitarian service.

Looking ahead to 2026, GSE's Global Surgery Scholar Program is poised for significant expansion. By combining formal education with meaningful experience, GSE is cultivating a generation of clinicians and professionals who are prepared to lead the future of global surgery and humanitarian care.



Dr. Jackie Zillioux as a GSE resident during her Global Surgery Scholar Program trip in 2021.



In 2025, Dr. Zillioux returns to Belize — as a GSE mentor — teaching GSE resident Dr. Dylan Hutchison!

WHAT IF

SURGICAL TRAINING DIDN'T REQUIRE A PLANE TICKET OR EVEN BEING IN THE SAME ROOM?

Today, surgical training can begin in virtual reality and end in a life-changing operation.

At Global Surgical Expedition, innovation is not about novelty. It is about multiplying impact, enabling a small number of expert mentors to train, support, and empower far more providers than in-person missions alone could ever reach. In 2025, GSE advanced this strategy through technology-enabled training methods that are already changing how surgical education is delivered.

One example is GSE's integration of **virtual reality (VR) surgical training** into partner education. Using a VR platform developed by **Dr. Lauren Siff** (GSE Board Member and SurgicalEd VR founder), a local surgeon in Belize began training to perform bladder sling surgery, a complex procedure that can dramatically improve quality of life for women with urinary incontinence. Through VR simulation, the surgeon was able to practice key steps of the procedure repeatedly in a safe, controlled environment. This training was designed as the

first phase of a deliberate pathway: **virtual skill acquisition, followed by observation of live surgery with visiting GSE teams, and ultimately progression toward independent practice.**

In parallel, GSE integrated **remote live surgical mentoring** through a partnership with Ohana One and TeleVU. With support from a generous grant, GSE installed advanced operating room technology in Belize that allows surgeon mentors to see exactly what local teams see during surgery in real time. From thousands of miles away, mentors can guide procedures, offer immediate feedback, and support decision-making as cases unfold. This capability transforms mentorship from an occasional event into an ongoing relationship, dramatically increasing the frequency and effectiveness of training.

From thousands of miles away, mentors can guide procedures, offer immediate feedback.

Innovation at GSE also extends beyond the operating room. Under the direction of **Jeanice Mitchell, PT, MPT, and Michelle Little, DPT**, GSE developed a comprehensive **six-month pelvic floor physical therapy training program** for midwives and rural health nurses in Belize. Participants completed structured didactic coursework and virtual instruction, followed by in-person clinical training with patients. Today, these providers are delivering pelvic floor health education and care independently, helping patients avoid surgery altogether while expanding access to essential women's health services.

Together, these innovations reflect a fundamental shift in how GSE approaches global surgery. **By combining in-person expertise with virtual platforms, simulation, and longitudinal mentorship**, we are creating training systems that reach farther, last longer, and empower local providers to lead. This is how innovation multiplies impact, not by replacing hands-on care, but by extending its reach exponentially.



PFPT Program. Pelvic floor therapists Jeanice Mitchell and Stephanie Lewis in Belize with the first four graduates of GSE's pelvic floor physical therapy training program.

1 VIRTUAL REALITY TRAINING

STEP 1 Belize surgeon Dr. Urroz practicing bladder sling surgery using VR technology.

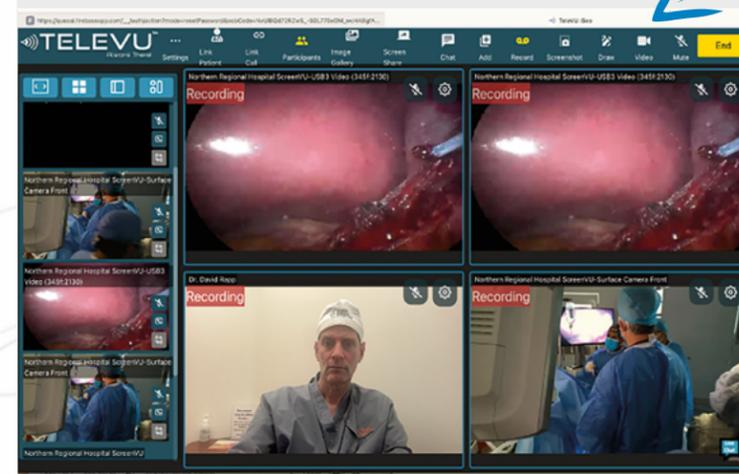


STEP 2 Dr. Urroz observing bladder sling surgery with GSE surgeon Dr. Jonathan Starkman.



2 REMOTE TRAINING

WE SEE ...



WHAT THEY SEE
From thousands of miles away!



LIFETIME GSE IMPACT



10.5M \$
 VALUE SURGICAL CARE

<\$515 \$ \$
 COST PER SURGERY

2021 ✂
 SURGERIES

<2% 🩺
 COMPLICATION RATE



3485
 QUALITY OF LIFE
 YEARS RESTORED



\$2.2M
 VOLUNTEER PROFESSIONAL
 SERVICES DONATED



75
 SURGICAL TEAMS
 DEPLOYED



\$1.6M
 MEDICAL EQUIPMENT
 DONATED

TURNING DATA INTO IMPACT

At Global Surgical Expedition, research is not an academic add-on, it is a critical tool for learning, accountability, and scale.

As GSE's programs have matured, so too has our ability to rigorously measure what works. In 2025, we continued to strengthen systems that allow us to track outcomes across clinical care, training, sustainability, and innovation. These efforts ensure that growth is guided by evidence rather than assumption, and that impact is both meaningful and measurable.

GSE's research framework goes beyond counting surgeries. By incorporating metrics such as **Quality-Adjusted Life Years (QALYs)**, the **economic value of surgical care delivered**, and **environmental impact**, we can assess how surgical interventions affect patients, families, health systems, and the broader

world. This data helps us prioritize interventions that deliver the greatest benefit and directly advance our vision: to change lives through sustainable surgical care.

In 2025, GSE-supported research was shared at national and international forums, contributing to broader conversations about sustainable global surgery, collaboration, and environmentally responsible care. These findings not only strengthen GSE's own programs, but also help advance the field as a whole by demonstrating what is possible when data, partnership, and innovation work together.

“As GSE's programs have matured, so too has our ability to rigorously measure what works.”

GLOBAL SURGICAL EXPEDITION
ENVIRONMENTAL IMPACT OF URETHRAL CATHETER DEPENDENCE AVOIDANCE
 Zackary Landsman¹, Parker Holum², David Rapp³
¹University of Virginia, Department of Systems Engineering, Charlottesville, VA; ²University of Virginia, Department of Urology, Charlottesville, VA; ³Global Surgical Expedition

INTRODUCTION

- Low- and middle-income countries lack access to surgery (TURP) for benign prostatic hyperplasia (BPH).
- As a result, long-term, catheter-dependent urinary retention (UR) is a significant burden.

We aimed to quantify the environmental impact (EI) of long-term catheter use and compare it to the EI of our Belize TURP program (GSE).

STEP 2

- Using these data, we modeled 3 scenarios
- Analysis 1 (A1)** EI avoided via GSE TURP program (7 years of catheter dependence before estimated death)
- Analysis 2 (A2)** EI avoided via immediate TURP (avoiding additional 10 years of catheter dependence pre-TURP)
- Analysis 3 (A3)** EI avoided by also decreasing catheter exchange frequency

Table 1. Environment Impact of Catheter-Dependence Avoidance (n=53)

	GWP (kg CO2)	Water Consumption (L)	Electrical Use (MJ)	GWP context: Gasoline Use (G)
GSE TURP program (A1) 7 years (duration) 2 weeks (exchanges)	28,840.06	196,725.21	16,876.06	3,245
Immediate TURP (A2) 7 years (duration) 2 weeks (exchanges)	70,040.15	477,761.22	40,984.71	7,881
Immediate TURP & reduced exchange frequency (A3) 7 years (duration) 2 weeks (exchanges)	35,020.07	238,880.61	20,492.35	3,941

CONCLUSION

Dr. David Rapp presenting GSE's research at the American Urological Association national meeting.

FROM THE FIELD

BELIZE

In Belize, GSE reached an important milestone with its first general surgery mission, reflecting the organization's growing reach across multiple surgical specialties and its commitment to addressing the full spectrum of surgical disease. Building on years of partnership and specialty-focused collaboration, this expansion allowed GSE teams to work alongside Belizean providers on a broader range of conditions, strengthening local capacity across multiple surgical disciplines.



HONDURAS

In Honduras, 2025 was marked by a deepening collaboration with One World Surgery and a focused effort to expand access to specialized care. Together, GSE and local partners spearheaded the growth of urology and urogynecology services, addressing critical gaps for patients who previously had limited or no access to these procedures. This partnership-driven approach reflects GSE's commitment to building specialty capacity within existing health systems, ensuring that high-quality surgical care continues well beyond visiting team engagements.





BOTSWANA

In Botswana, GSE's long-standing partnership with Princess Marina Hospital continued to deepen in 2025, with a growing emphasis on training and skills transfer.

Through sustained collaboration, hands-on training, and longitudinal mentorship, local providers expanded their ability to provide access to surgical care for women.



For 7 years...it was rough...bleeding and pain. Thank you for all that you do."



Thank you, for giving me back my life."



CELEBRATIONS AND ACCOMPLISHMENTS

SAVE THE DATE

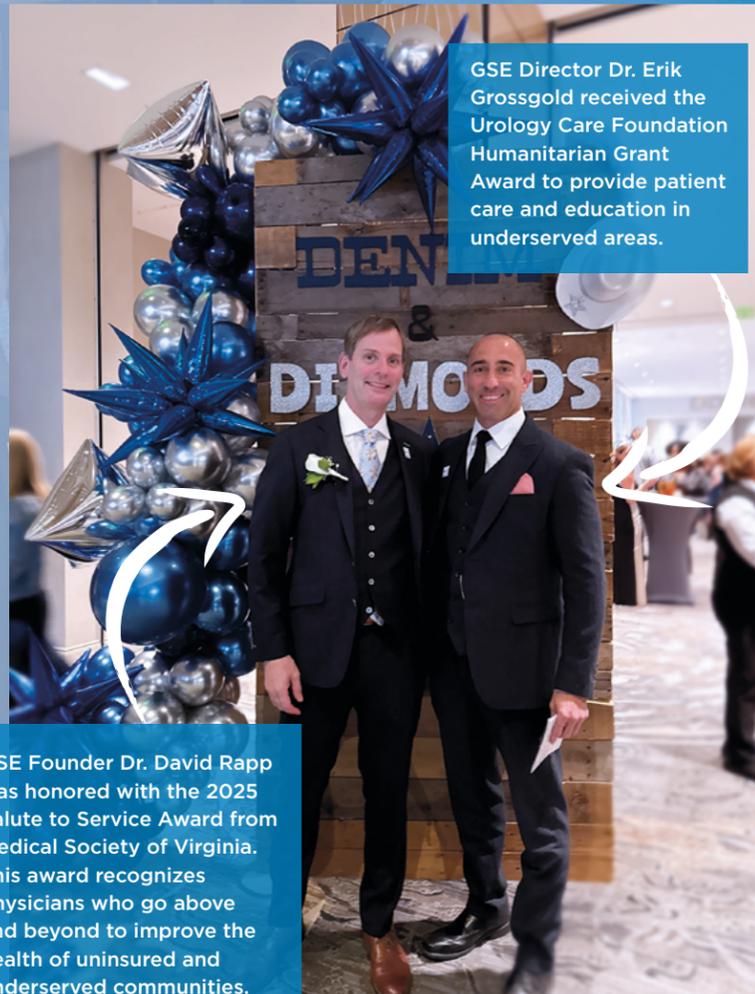
2026 Annual Gala

November 20, 2026

The John Marshall Ballrooms



GSE IN PICTURES



GSE Director Dr. Erik Grossgold received the Urology Care Foundation Humanitarian Grant Award to provide patient care and education in underserved areas.



GSE Founder Dr. David Rapp was honored with the 2025 Salute to Service Award from Medical Society of Virginia. This award recognizes physicians who go above and beyond to improve the health of uninsured and underserved communities.

GSE celebrated the career, mentorship, and dedication of Dr. Kinloch Nelson with the GSE Humanitarian Award at the 2025 GSE Gala.



CONTACT US TODAY!

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