

Global surgery trips in the COVID-19 Era: collateral good

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Introduction

The COVID-19 pandemic has largely resulted in the suspension of on-site visiting global surgery trips. As a result, many organizations have temporarily transitioned from the direct provision of surgical care to alternate models of assistance, including virtual lectures or focus on equipment donations (1). Determining when and how best to reinstitute on-site surgical trips is difficult. Related considerations balance the benefit of addressing the significant unmet surgical burden resulting from a nearly 2-year suspension of surgical trips with the potential harm caused by returning to in-country visiting surgical trips. For example, international program directors must consider potential deleterious impacts such as occupying beds with surgical patients that may be needed for COVID patients. Given that patients often travel from distant locations to receive specialty care, this also risks contributing to widespread COVID transmission.

Guidance and models for reestablishing in-country global surgery initiatives are seen in recent literature. These reports detail extensive considerations to help balance risk and impact, as well as to ensure safe and ethical visiting surgical trips. Such considerations include understanding the local hospital and operating room capacity, minimizing the use of host countries limited personal protective equipment, limiting trip personnel, and gaining knowledge of local infection and vaccination rates (2,3). Moreover, general guidance regarding the reestablishment of health services through the COVID pandemic or in settings of disaster relief is well-established and also serves as a framework for healthcare leaders to navigate care delivery in crisis or pandemic settings (4-6). Such guidance includes an understanding of the stages of pandemic or disaster

evolution and unique considerations such as environmental assessment, reassessment of care priorities, and the management of service backlogs.

Combined, this background highlights the important considerations for visiting teams and potential deleterious impacts of reestablishing in-country services. Even so, such efforts may also present unexpected opportunities to help host countries with separate health care objectives—collateral good.

Collateral good

Global Surgical Expedition (GSE) is a medical charity that provides surgical care internationally to populations in need. GSE has a longstanding collaboration with Belize, a country with limited urologic infrastructure and care access. The Statistical Institute of Belize reported 16,952 surgeries performed in 2018-2020, with no urologic surgeries recorded in this report (7). The collaboration between GSE and Belize supports the provision of urologic and urogynecologic surgeries and includes the ministry of health and multiple regional hospitals. Since 2012, GSE has provided over 400 urologic and urogynecologic surgeries in Belize to help treat surgical diseases. In September 2021, a site visit was conducted, in part, to help assess country readiness for reinstitution of surgical trips. This assessment was conducted in collaboration with both site leadership (hospital chief of staff, clinic leadership) and as national health care leadership. During this visit, a clinic was also held to evaluate prospective surgical patients referred by local providers.

As part of this site visit, health care leaders outlined an infrastructure and logistical framework to optimize

the safety of a prospective surgical trip, with much of this focusing on COVID-19 measures. Multiple preventative measures were developed by local officials and supported by GSE, including vaccination requirement for visiting team members, negative COVID testing prior to clinic arrival, and patient evaluation by schedule appointment time only in order to avoid mass congregation of patients that is commonly seen as patients travel from long distances and wait in the clinic lobby. As one of these measures, local leaders expressed a desire that all potential surgical candidates be fully vaccinated prior to surgery. Foremost, vaccination was felt to be beneficial to optimize surgical safety and reduce risk of stimulating COVID spread given the large influx of patients anticipated. This was deemed important given the more limited resources specific to both the clinic and health care region moreover with respect to treating COVID patients. In addition, peri-operative COVID infection has been demonstrated to increase risk of post-operative mortality and is an important consideration to surgical risk (8). Combined, healthcare leaders felt that the prospect of free surgical care might stimulate patients who were otherwise unvaccinated to seek vaccination, thus helping to support the important national healthcare objective of a fully vaccinated population. Collateral good.

Over the next two months, GSE and Belizean health care leaders collaborated to forward this initiative. All patients requiring surgery that were seen in September 2021 were not only educated by a GSE program coordinator regarding this requirement, but also provided logistical information and support to help achieve vaccination prior to the November surgical trip. Additional patients referred subsequent to September were instructed to present for evaluation in November but also informed that, should they need surgery, vaccination would be mandatory. Accordingly, all patients were given sufficient time to achieve vaccination. Patients electing not to pursue vaccination were provided with appropriate care referrals to a urology provider at a larger central hospital with greater capacity to treat COVID patients.

In November 2021, the visiting GSE surgical team arrived for a 7-day surgical trip. A comprehensive clinic was held at trip initiation to again assess patients from the prior visit as well as additional patients subsequently referred. This clinic comprises not only surgical evaluation, but also anesthesia and nursing evaluation. A variety of urologic diseases were evaluated, including a significant number of patients with urologic obstruction (benign prostatic hyperplasia and urethral stricture disease) and pelvic organ

prolapse. In total, 36 patients were seen in clinic, all of whom were fully vaccinated (1 or 2 doses depending on vaccination type) by that point and tested negative for COVID prior to evaluation. At least five of these patients were vaccinated related specifically to the surgical trip. As a comparison, publicly available data reported that approximately 46% of the Belize population was fully vaccinated at the time of the trip (9). Only one additional patient previously screened with known urologic disease reported failure to receive full vaccination. Interview triage revealed non-urgent complaint (urinary incontinence) and local care referral was made as described previously. One additional patient tested positive prior to clinic initiation and evaluation was deferred.

Consistent with general trip protocols, patients needing surgery were triaged based on surgical acuity and as many surgeries performed possible within the trip duration. The GSE surgical team was able to complete 17 surgical procedures, including transurethral resection of prostate, urethroplasty, cystolithotomy, and a variety of repairs of pelvic organ prolapse and stress urinary incontinence. An additional 14 diagnostic cystoscopies were completed. Remaining low-tier acuity patients were referred to local surgeons for care. Follow-up of all patients was performed by a local urology and gynecology physicians who were in contact with GSE team members regarding patient care. In addition, formal case records are shared across both the hospital and healthcare ministry to allow for detailed records of patient history, surgical details, and follow-up within the Belizean medical record system. One patient undergoing open vesicovaginal fistula repair required drainage and antibiotics in the treatment of a surgical site abscess. No other major complications were observed to date. In follow-up with hospital leadership, no surgical patients were reported as COVID positive during the immediate follow-up period and clinic COVID admission totals remained stable throughout and immediately after the surgical trip.

Commentary

As the international community seeks to reestablish in-country surgical services, it is important to carefully assess the risks and benefits and attempt to do so in a safe and responsible manner.

Effective global surgery outreach is based on understanding and prioritizing the needs of host countries. These needs commonly change or evolve. With this

understanding, international organizations can increase their impact by looking for new or unique opportunities that may serve to provide additional assistance to host countries.

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