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# The COVID-19 Crisis and its impact on congenital cardiac surgery charitable endeavors

## 1 | INTRODUCTION

As pediatric cardiac anesthesiologists, the COVID-19 crisis has created unprecedented challenges as we try to meet the needs of our patients and protect their safety. While these challenges are valid and unprecedented, the situation facing children with congenital heart disease globally is even more grave. Nearly 1 in 1000 children are born with a significant heart defect that will require surgery, yet throughout much of the world, access to care is limited. Surgical and medical management of CHD is expensive and resource-consumptive, posing particular challenges to hospitals and health systems with limited budgets and manpower. Sadly, CHD mortality rate in developing countries is roughly 20%, and for those who survive, many poorly thrive.[1]

Many pediatric anesthesiologists are involved with international charities which provide critically needed cardiac services to children in low- and middle-income countries. These organizations take on a number of forms. Some organize service trips to provide both direct patient care and assist in capacity building in underserved areas.[2,3] Anesthesiologists play a vital role as part of these surgical teams. Other charities facilitate the travel of patients to our home institutions in the United States, where we care for them at reduced costs.[4,5] Still others provide direct patient services on a long-term basis.[4] Anesthesiologists may act as volunteers, advisors, and even board members to these organizations. There are also countless examples of providers with personal or familial links to other countries who provide intellectual exchange, education, and training without the need for larger organizations.

With the onset of the COVID-19 crisis, many of these endeavors have been severely restricted or completely halted. Travel bans have meant that children previously scheduled to come to the United States have had their surgeries canceled. Similarly, organizations like Heart Care International, which sends surgical teams to Central and South America, have been forced to cancel all spring trips. Even if such trips were possible, the volunteers involved face the prospect of lengthy quarantines on their return and further lost work. On the ground, charity staff members report difficulties in getting patients to clinic visits in locations that rely on overcrowded public transportation. The result is that more children are being denied life-saving interventions.

Haiti Cardiac Alliance, an organization which sends Haitian children around to world to receive cardiac interventions, provides an excellent example of this problem. They estimate that approximately 48 children with tentative plans to travel abroad for surgery or catheterization have been canceled as a result of the crisis. Of them, 7 have died, and 3 have seen disease progression to the point of inoperability. These children may not be dying of COVID-19; rather, they are suffering from delayed care it has caused.

This situation presents a number of logistical, clinical, and even ethical challenges to anesthesiologists who volunteer their time and efforts with these organizations. As physicians, we have a call to heal, regardless of personal safety. However, we also have the responsibility to "first do no harm," and we must be cognizant that travel at this time may represent a risk to the patients we treat while abroad and to those we treat when we return. Similarly, welcoming patients into our institutions may place them at risk of exposure, both while traveling and while under our care. And yet, the number of children needing help grows higher with each day.

There is no easy solution to this problem, and valid solutions today may become invalid tomorrow. What is clear, however, is that we as a community of providers must keep the needs of all children in our consciousness as we plot a path out of this crisis. This must include plans to re-open our doors to international patients as we begin to resume nonurgent surgeries. We must also support our partner charities as they attempt to resume the incredible work they do. This includes careful monitoring of the health risks of each site chosen, and coordination with home institutions so as to ensure that work can be safely resumed when providers return home. We should reach out to communities with established relationships to understand their needs and share our empathy, to be better equipped to serve them in the future. In addition, we should also consider the role of telehealth and tele-education with our colleagues in lower income regions until we can return in person. Finally, we must support our fellow clinicians, who give of their time and livelihoods to provide care to those most in need.

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## CONFLICT OF INTEREST

None.

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# Unexpected benefits of the COVID challenge: When critically ill adult patients are managed in a pediatric PACU

The severe acute respiratory syndrome coronavirus 2 pandemic has stressed critical care units worldwide. In France, from January 2020, the infection spread rapidly throughout the country.1 In Paris region (12 million inhabitants), 3000 cases of COVID-19 were diagnosed during the last week of March, and 1000 additional patients were admitted to intensive care units (ICU).2 To cope with the catastrophic pandemic crisis, all nonurgent surgical and medical activities were postponed.3 Medical and nurse staffs were reassigned to COVID-19 dedicated ICUs, allowing an increase in regional ICU capacity from 1200 to 2200 beds. However, the overall capacity remained dramatically insufficient.

During an institutional crisis meeting, it was decided that, to face this massive ICU bed shortage, we had to come up with a new and unconventional option: opening an adult ICU, managed by pediatric anesthesiologists, in our mother and child hospital. In our institution, the only adult healthcare providers are dedicated to the obstetrics