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Title: A STRATEGIC POLICY OF CAPACITY BUILDING FOR THE DEFINITIVE TREATMENT OF ADVANCED RHEUMATIC AND STRUCTURAL HEART PATHOLOGIES-35 YEARS OF EVIDENCE, IMPACT AND LESSONS LEARNED IN UNDERSERVED NATIONS

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Background & Aims: Underserved patients and clinicians in geographic areas with underdeveloped medical infrastructures are currently being assisted by a multitude of humanitarian efforts with varying success. Although preventive strategies are critical in the long-term, educational efforts to train local medical teams to perform definitive therapies including surgery and catheter-based methodologies are important for addressing the global burden of cardiac pathologies including rheumatic heart disease (RHD). Our international humanitarian organization has a 35-year history training local medical professionals to create new or enhance established cardiac treatment programs for the management of RHD, structural heart disease (SHD), and congenital heart (CHD).

Methods: Our collaborations have involved sending complete cardiac care medical teams to six adult and eight pediatric cardiac care institutions located throughout Eastern Europe, Asia, and Latin America. Importantly, regionalization and program replication have been critical for accomplishing nationwide care. Sustainable program development requires broad on-site educational platforms that include medical staff and lay populations, regional political involvement, visiting scholarships, time-limited goals, outcomes surveillance and timely communications of clinical and administrative challenges. Typically for each program, a preemptively planned 5-7 years of involvement by our organization results in graded increased levels of complex disease management including open surgical and catheter-based interventions.

Results: Over a 35-year period the establishment of multiple regional treatment programs has resulted in a large volume of definitively treated patients with RHD, SHD and CHD. Over 45,000 patients of all ages have received definitive surgical or catheter-based therapies in either newly established or enhanced existing cardiovascular programs on four continents. Outcomes data from our direct involvement capacity building with 10 programs (4 adult, 6 pediatric) in one large country demonstrate the profound impact that developing multiple regional programs (scaling) can have on the volume of patients treated (Fig 1).

Conclusions: Strategic capacity building at multiple regional sites results in profound increases in the numbers of patients with RHD, SHD and CHD served and improves the scope of complex pathologies management. Replication efforts and stepwise sustainability goals are essential for major impact and possibly as germane to prevention approaches as to complex invasive management strategies.