I. Introduction

As an organization, Project Embrace is dedicated to the reduction of global health inequalities and promotion of a healthy planet. We do this through the collection, sanitation, shipment and delivery of sustainable medical devices that provide either skeletal structural support or provide mobility aid for patients in need across the globe.

The devices we propose to reuse are noninvasive and range anywhere from crutches, slings, neck braces, knee braces, medical boots, wheelchairs to orthotic materials. Currently, in medicine, it is practiced to discard these forms of devices after limited use either to a landfill or by incineration. This is wasteful and harmful to the environment. Alternatively, Project Embrace has emerged as a way to reuse and re-distribute these types of noninvasive medical devices from the United States to patients in impoverished communities across the globe who may benefit from their use.

Once collected, the medical devices are sent to healthcare facilities located in low and middle-income countries to be refabricated and re-utilized for patients in need. These healthcare facilities are previously identified and selected based on the demand of our donation as well as their capability to reuse our donations.

II. Methods

Several steps were taken to establish the mission and operations of Project Embrace. First, we interviewed key stakeholders in healthcare, business, law, and the non-profit industry to collect data on the structure of our market as well as its appetite for our approach. Then, an evaluation of existing laws, patents, and other potential obstacles was done to understand the feasibility of our project; and lastly, a cost-benefit analysis was conducted to calculate the expenditure needed to operate, as well as how much money Project Embrace would be saving our international partners should they work with us.

III. Results

Our results confirmed the supply and demand to fuel our model; and that it would be beneficial for all parties involved at no expense to our medical device donors or beneficiaries. Furthermore, we affirmed that our system to collect, sanitize, ship, and deliver our donations not only falls in congruence with the standards set forth by the FDA but is cost-effective through federal grant support, and endorsements through the global health community.

Moving forward, we aim to launch our first successful campaign of donations, collected from private donors in Salt Lake City, Utah to the Vegesna Foundation located in Hyderabad, India, during the summer of 2017. By doing this, we will be able to further investigate the impact of our donations as well as specify the particular demand of medical devices needed.

IV. Discussion

Project Embrace takes a unique approach to addressing contemporary global health issues by reusing medical devices instead of donating surplus medical devices. Indeed, by repurposing excess and waste in one country to meet the need for usable and affordable medical supplies in another country, Project Embrace is an innovative way to address global health inequalities while addressing the pressing concern of environmental justice through the reduction in medical waste in hospitals located in the United States.

Additionally, the broad range of donations collected by Project Embrace gives us the ability to address a multitude of diseases and conditions. Requesting medical donations that help provide “skeletal structural support or provide mobility assistance” equips us to assist a wide variety of patients who otherwise are affected by undisclosed conditions which help preserve the privacy and confidentiality of our beneficiaries.

V. Acknowledgments

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