

“M.O.R.E Life Designing mobile operating rooms to aid in natural disasters”

I PRO 362 Illinois Institute of Technology 2011

While state-of-the art technology is available to ensure the most efficient delivery of medical aid to disaster areas, the environmental obstacles many times play a devastating role and prevent help from reaching isolated locations. In addition to the lack of access, minimum sanitary conditions are rarely in effect, which is the number one cause of morbidity in these situations. If medical aid is in effect current costs and installation of these facilities are counterproductive as they are expensive and not easily assembled.

The M.O.R.E. Life project is pursuing these issues of, mobility, sanitation, and affordability by creating an inexpensive modular portable 5m x 5m x 4m tent like structure as a sanitary operating unit with an air-filtration mechanism that can provide a sterile environment for the individual while he/she is being medically treated. The portable O.R will be lightweight, weather proof, air tight, and will fit in a four to six backpack system that could be assembled on site. The use of solar power panels in combination with a battery system is being implemented considering the limited access to power sources in disaster areas. It is our hope that this technology is culturally accepted and can be used in combination with local authorities.

Currently the MORE Life project is in an early alpha prototyping phase, working in combination with international doctors in order to have a further understanding of the medical needs in order to have a fully functional OR. Medical personnel in Uganda will help us in testing our device in rural areas where such technology is most needed, and where everyday conditions approximate those of disaster areas.