Tarisa is the 20-year-old mother of Kasem. They live in Thailand in a rural community, and have no access to medical care outside of her community's understanding. She hopes to return to farming with her family once her son is old enough.

Nattapong is a 33-year-old man living in rural Thailand. He lives in a farming community, but spends the majority of his time repairing farm equipment and local homes.

Chakan is a 58-year-old mother of 3 and grandmother of 6. She has spent most of her life tending fields and raising cattle, but spends the majority of her time now caring for her family.

(w)heal
Improving South East Asia's Health Through Access
In a region with an average of less than 1 physician per 4,000 individuals, the need for quality and broad ranging care is immense. While surgical issues such as infant deaths, life threatening injuries, and cancer treatment are a small portion of the clinic's medical burden, they are a large time burden for providers and an even more significant spatial burden as surgical equipment is cumbersome. For these reasons, a full one third of clinical space has been dedicated to surgical intervention. The remaining two-thirds of space is designed to provide preventative care, nutrition education, and health lifestyle lessons. By integrating clinical spaces into community spaces, the barrier to access can be removed and healthcare can be delivered safely, effectively, and can generate dramatic improvements on health outcomes for the rural South East Asian population.

**MEDICAL BURDEN**

Based on current death rates from the WHO, our facility aims to intervene on the following diseases within our target population of 30,000 individuals.

- Infant Deaths
- Cancer
- Communicable Disease
- Heart Disease
- Lung Disease
- Diabetes

**PRIVACY**

For a space to act as an open community gathering location and a medical clinic, privacy is important. Pleated aluminum panels allow for a balance between a community gathering space and clinical privacy while also letting natural light into the clinic.

**EDUCATION**

Teaching and sharing skills, not just related to health are vital to sustaining the communities of South East Asia. By incorporating local craftsmen into the development of the clinic, skills and expertise can be shared and cultivated across all participants.

**COMMUNITY**

The concept of "healthcare" involves more than being sick or healthy. It includes the mental well-being of the individual, the social health, and the community as a whole. By creating a community center, as well as a health center, the region can benefit from shared experiences and lessons.

**ASSEMBLY**

In a region that requires mobility, immediate response, and treatment for a growing population of individuals with Non-Communicable Diseases, a medical clinic that can reach out to rural populations is vital. By building the basic functions of the clinic offsite, clinical integrity can be maintained. Through local craftsmen, the clinic can be built into the fabric of the region. And finally, by becoming part of the community, the clinic will be available for continuous improvement of health outcomes, with both long and short-term outlooks.

**COLOR**

The use of color in medical settings provides a diversion from the often concerning experience. Color can be used not only as an aesthetic, but also as a wayfinding aide. In a region with 12 official languages, and over 1000 others recognized, using color to describe where to dispose of biological hazards, or even where to congregate can reduce confusion and increase safety.

**CIRCULATION**

By pushing all of the circulation and waiting areas outdoors to the covered decks the spread of communicable diseases can be reduced. These outdoor spaces also act as a location for community gathering and for education of the community on health issues.
By utilizing nurses, midwives, and telehealth capabilities, our facility will be able to connect with all ranges of medical professional and provide broad interventions if and when necessary.

As communicable diseases persist throughout the region, it is important to continue efforts at reducing diarrheal disease, the spread of vector-borne illness, and STDs. With the appropriate staff and easy access to information through technology this can be easily accomplished.

In a region where the elements, including heat and rain, are significant barriers to safety, it is vital that life saving medicines be kept stable, cool, and dry. With over 96 cubic feet of storage space, the clinic will have ample capacity to store surplus medicines in case of emergency.

To resist the extreme conditions of the region the clinic employs a mix of natural and mechanical systems. The natural systems such as double skin ventilation reduce the need for maintenance while Photovoltaic panels provide reliable energy sources.

Salt, processed food, and sugar are the leading causes of the rising rates of diabetes and obesity according to the WHO. By holding informal and interactive cooking lessons - our clinic can teach the necessary skills to avoid disease in an increasingly globalized region.

Tarisa safely gave birth to her son, Kasem, in the treatment room, proudly had him vaccinated against polio in the exam room, and they come back annually for check-ups. The educational classes as a young mother taught Tarisa of the dangers of using unclean water when mixing baby formula, so she breastfed Kasem as a baby and he has grown up healthy because of it.
Like the surrounding houses on stilts the trailer the clinic is constructed on will elevate it above the possibility of rising waters. The clinic is primarily designed to use minimal energy with daylighting and natural systems but parts of the program such as medicine refrigeration require energy which can be gained through a solar array on the roof. The main goal is to prevent the clinic from being a burden on the community it serves.

To again use the sun the end walls will be a double skin where the sun heats the air between the layers of polycarbonate creating a chimney they naturally pull the air from the room.

One of the most abundant resources in this region is rainwater. By collecting the water it can be used for plumbing and can be filtered using a simple ceramic filter for drinking and cooking.

The perforated facade will allow light into the exam room but also provide privacy and shade. Using local techniques and knowledge shading structures can be constructed to the individual climate conditions.

Using local techniques and knowledge shading structures can be constructed to the individual climate conditions.

Aluminum panels do not rust which is an important factor in a humid, wet climate. Panelization allows small portions to be easily replaced if damaged.

Semi transparent polycarbonate was chosen for its durability, its insulation value and ability to both transmit and shade sunlight due to its ribbed design.

Polycarbonate

Thatch or other similar material is the choice for local roofs. It is low cost and uses local vegetation for materials. Because it is common in the region locals can be employed on site for construction.

The clinic will not only act to provide health interventions, but it will also be a place to gather to learn. Staff will be able to instruct local residents about the benefits of water purification, healthy eating, and tobacco cessation.

Chakan has spent her entire life teaching her children about cooking, cleaning, and properly rearing a family. With the clinic’s new space for group classes and the attached kitchen, Chakan has found a renewed even more robust voice in her community. Additionally, she has become a neonatal nurse in the village and makes house visits to assist new mothers in providing proper care. She learned many of her new skills through communicating with midwives in the nearby city via the telehealth connection.

Because of the modular mobile design of the clinic they can be assembled with multiple clinics. This will allow the same spaces to easily serve a population larger than 30,000.

AGGREGATE: because of the modular mobile design of the clinic they can be assembled with 1 to 3 multiple clinics. This will allow the same spaces to easily serve a population larger than 30,000.