TO CARE, TO CURE, TO EDUCATE

Using Care, Cure and Educate as guiding principles, this proposal merges the knowledge and simplicity of tradition with the use of modern and local materials to offer a functional, recognisable and simple solution to this clinic. Flexibility is the key to success, since this strategy needs to accommodate to a variety of contexts. Like the bamboo bends to the wind, this project bends to the potential of the culture and traditions it is placed in, allowing for medical care, cure and education, while engaging the local tradition in the process.
Performance and design principles

The structural geometry is based on the triangle, the strongest and simplest of structural solutions. A triangular section offers high ceilings to naturally dissipate heat, as well as steep roofing for a fast water run-off. This basic structure allows for a large open-plan system without columns, with flexibility of distribution of spaces over time. Flooring is thin and cool, but where more controlled spaces are required (surgery space, toilets or medic storage) specific materials are used to create a "box in a box system" meeting the specific requirements of the function. This allows for targeted material allocation where necessary and a better use of resources.

Modularity

The construction system is modular, easily erected and dismountable. It allows for easy expansion with time if more resources are allocated, but also facilitates eventual transport of the facility to another site. Façade elements are modular and easily exchangeable, allowing for re-use of the panel solutions, to any configuration.

Accessability and connectivity

A number of options are possible for access and connection to existing structures. Access is easily changed to any of its facades, allowing for simultaneous access and connection to existing buildings to happen if necessary. Barrier free access, as ramps and stair combination are proposed, but also direct access to existing infrastructure is possible.

General description

The distribution of the functions was aimed to satisfy the brief with the least of unused square meters, while effectively allowing for growth and expansion if resources allow. The entrance axis immediately allows for reception space, while direct access to all the service happens from the central area. This means no loss of square meters in circulation and a simple and clear orientation strategy. Bright polycarbonate panels, easy movable and hygienic divide nursing spaces, while toilets medical storage are enclosed in rigid and robust material cladding like Formica clad ply or synthetic panels.

Legend

1. Waiting space, educational space
2. Nursing space/ big nursing space
3. Small surgical procedure space
4. Temperature controlled room
5. Toilet (accessed by disabled people)
6. Small kitchen

Total area: 59 m²

Flexibility

It is important to be prepared for unforeseen events. Once there is a health care unit set up in terrain, which is otherwise difficult to access, it is going to be well known and frequented. The unit provides a maximum of flexibility in that regard. Internally, extra nursing spaces are designed in order to quickly react to daily needs, by the simple movement of sliding walls. This allows spaces for the day-to-day services as well as for exceptional events such as childbirth or first-aid after severe accidents. Long-term flexibility has also been designed in the project. If the clinic were to grow and more modules were to be added, all spaces, including toilet and medicine storage, can be allocated to another position in the plan if necessary, given their autonomous 'box in box' quality.

Wall and volumes

- solid walls (for controlled environments)
- light walls (for open space partition)

Building strategy

The healthcare unit is constructed of building elements that are, easily understandable and quickly put together or taken apart. We have been guided by standard materials suggested by the WHO as well as introducing local materials depending on the local resources and traditions; from cladding, flooring and shading elements. Steel profiles allow for the main structure to be solid and efficient, while aluminium cladding will serve for a long life roofing system.
To care
The area of the unit the most frequented is the nursing space for outpatient treatment. It covers basic medical needs such as patient reception, information and counselling and small treatments as well as vaccination and other standard procedures. The nursing care zones can be rearranged corresponding to specific needs given the open plan structure.

To cure
Nursing spaces are designated to be efficiently arranged in order to meet the daily needs. A closed, sterile environment for small surgical procedures is more contained, clad in easy to wash materials. Nursing spaces can easily become emergency cure spaces if necessary due to the polycarbonate paneling.

To educate
Health education, information and preventive workshops are one of the functions of the designed unit. Due to its spatial flexibility, it is possible to create open spaces, which serve as a larger educational area for special events. This does not interfere with the more static functions as surgery, storage and toilet.

Legend
1. Waiting space, educational space
2. Nursing space
3. Small surgical procedure space / large nursing
4. Temperature controlled room
5. Toilet (accessed by disabled people)
6. Small kitchen
The principles of the building are deduced from traditional south-east Asian building typologies. Steep triangular roofs allow for ventilation and indirect light; the facade cladding materials are locally sourced and therefore culturally appropriate.

The structure of the building is based on a grid of 1.20 x 1.20 m. This provides the use of standard material sizes in every module. Foundations can be concrete or car tire based according to context and the building is raised allowing for eventual flooding. The building structure slides into the foundation structure, permitting the building to be dismantled and moved.

The materials used for construction are repeated in every module. This helps to keep the material selection as small as possible, as well as interchangeable. The main parts of the structure locally cut and bolt ready at the closest local manufacturer. All facades are impermeable ply or polycarbonate. If the façade is translucent, the solar shading is derived of local materials covering a rigid modular frame.

The basic frame is composed of steel C sections and square tubes, easily cut to form the basic triangular structure. This basic system is also easily raised and bolted to trusses to make the first module stable. It is the simplicity and strength of this system that gives the efficiency in plan to the project.

Additions to this basic module can be easily added by continuing the procedure and even allowing for additions once the building is constructed. This adds great flexibility to the project, which permits future growth of services to the community.

Local bamboo
Palm leaves
Local wood

Aluminium
Steel profile
Formica
Polycarbonate

Tire foundation

References
Materials
Foundation grid