

The role of Reciprocal frame Shelter Kits (RSKs) in the COVID-19 pandemic

RSK shelter kits can greatly assist communities to prepare and rapidly respond to the pandemic.

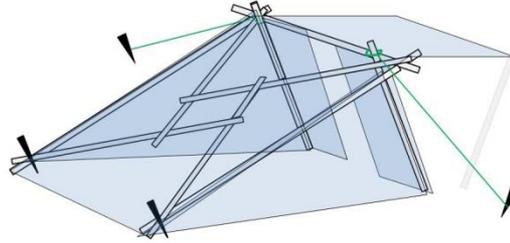
In the COVID -19 pandemic achieving effective isolation can be particularly difficult in poorer overcrowded communities or displaced families living in camps. Makeshift shelters are often erected side by side with little attention to ventilation, and this results in shared airspaces that increase virus transmission.

The unique features of the emergency RSK shelter kits make them especially suitable to achieve temporary practical distancing of individuals or whole families.

The lightweight kits are strong and highly efficient, using 33% less bamboo than any equivalent shelter. The roof frames of the RSK use only 2 lengths of a bamboo that are simply lashed together on the ground, thereby enabling any family to rapidly make their own shelter.

The standard elevated RSK shelter kits provide communities with two further advantages in the pandemic. Their improved ventilation can potentially reduce coronavirus transmission, and their modular structure enables the rapid erection of temporary isolation wards and other ancillary medical units.

The emergency RSK shelter kit



A 9 pole kit that can be assembled in less than 1 hour

Providing the ability to physically distance or isolate in rural terrain.

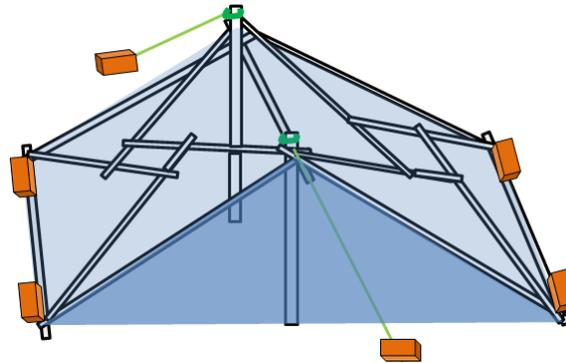
This shelter can be used for temporary 14 day isolation of a family or individuals where the objective is to keep the family unit together in the event of an individual family member becoming infected or exposed to coronavirus. It can be simply partitioned to create two separate main ventilation apertures to facilitate this isolation of individuals within a family if required.

Unlike an “A” frame tent the lower edge of the roof frame can be lifted off the ground if additional ventilation is required.

If temporary isolation has to be prolonged the same roof frame can be used to upgrade this shelter to the standard (elevated) RSK shelter unit.

In an absolute emergency and where tarpaulins may not be immediately available, the roof frame can be thatched with palm leaves or support wooden planks or other available materials.

The urban double RSK

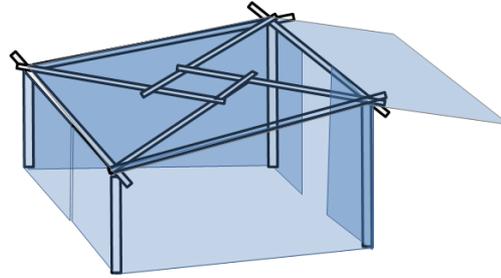


A 17 pole freestanding shelter kit

Providing the ability physically distance or isolate in urban terrain

Designed for urban disasters, particularly earthquakes, this is a shelter that can be freestanding on concrete and does not require support posts to be sunk in the ground. These advantages make it particularly suitable for providing COVID-19 physical distancing and isolation options in overcrowded urban settlements.

The standard RSK shelter

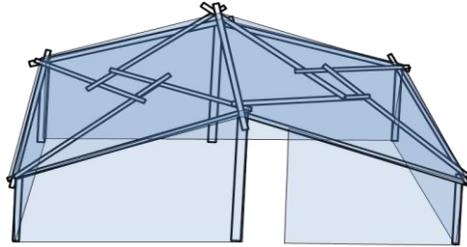


A 12 pole standard RSK shelter kit

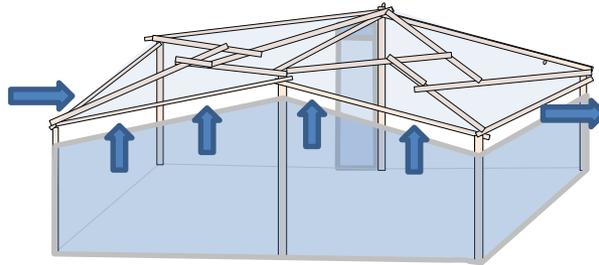
All the mobility and practical features of the emergency RSKs for temporary isolation with additional ventilation and modular options.

Improving ventilation in shelters is recognised as important to help reduce transmission of respiratory viruses including COVID-19. By avoiding the use of the bamboo lattice roof structure that attaches directly to the side beams of traditional temporary shelters, the ability of recipients to create a ventilation gap at eaves level is greatly facilitated. This is in contrast to the RSK where the attachment of the roof tarpaulin along the side beams is uninterrupted along its length. This enables the family to create “through ventilation” at eaves level. By the addition of two more lengths of bamboo to create a separate attachment point for the top of the wall tarpaulin, the ventilation can also be adjusted by the family as required.

The standard double RSK shelter kit



A 22 pole standard RSK shelter kit *



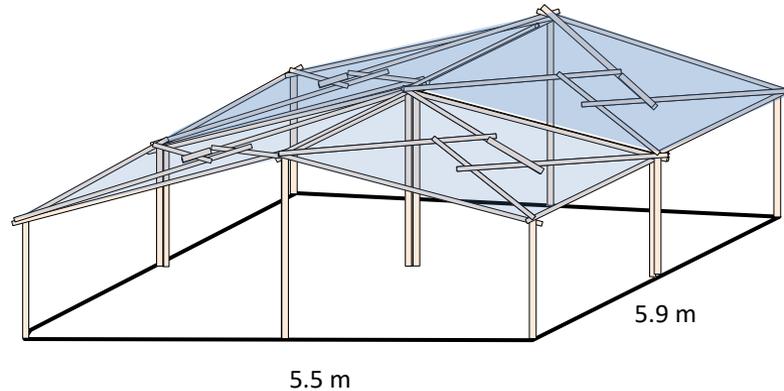
Adjustable through ventilation at eaves level

Temporary isolation for the larger family.



Standard double opened up

Modular RSK shelter units (open sides)

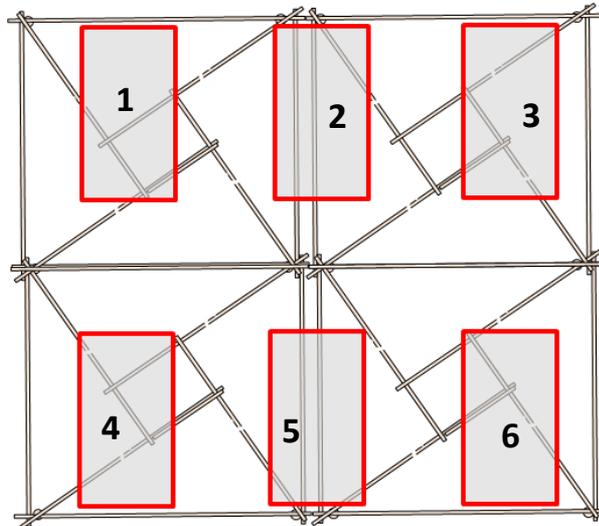
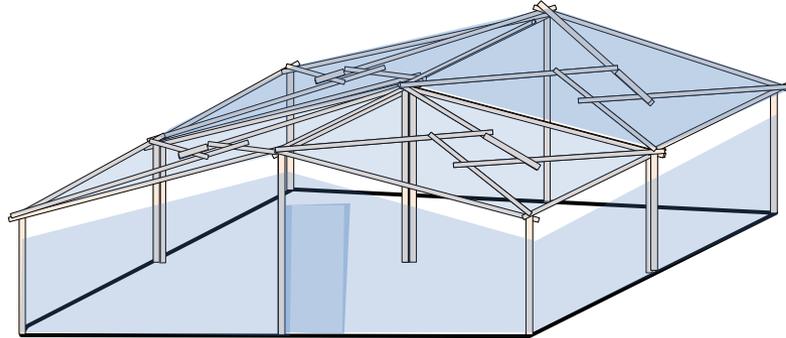


A 41 pole 4 unit RSK module

To facilitate social distancing by providing temporary sheltered space.

Two standard double RSKs combine to make a large covered temporary reception space. In the pandemic these units can be very rapidly erected and used for temporary screening units or any situation where larger covered but well ventilated waiting areas are required. Additional units can be added very quickly in response to rapidly changing needs and partitions can be hung from the roof frames to further enhance social distancing if needed.

Modular RSK shelter units (enclosed sides)



Each of these 4 unit shelters can provided a temporary isolation ward for up to 6 beds.

Additional units can be added for larger wards



The RSK ceiling is much easier to clean and disinfect

This is due to RSK using only complete bamboo poles compared to the bamboo lattice of traditional shelters.

By avoiding the use of a split bamboo or cane lattice ceiling the risk of fire is also reduced.

Conclusions

Social and physical distancing are some of the main methods we use to help control the spread of coronavirus.

RSK shelters can provide vulnerable communities with a cost effective opportunity to achieve temporary isolation for both individuals and families.

The improved ventilation of the RSK can potentially assist in reducing the transmission of coronavirus in overcrowded living conditions, especially in refugee camps.

Refugee camps are at high risk of severe storm or cyclone damage. The ability to very rapidly erect thousands of emergency RSK shelters would be an effective means of achieving effective social distancing for families at this very vulnerable time.



RSK Shelter Kit

**Winner of the Aidex
innovation award Brussels 2015.**

Shaun Halbert
Director RSK Shelter Charity
Dr.shaunhalbert@gmail.com
www.RSKshelter.org