



Presentation on the:



Presented by Walt Howard

AquaSHELTER

Isolation Room



AquaSHIELD Enclosures has been manufacturing protective enclosures for outdoor water conveying equipment since 1996. Our enclosures are designed to maintain 40°F inside with outdoor temperatures as low as -30°F. We operate out of a facility in North Little Rock, AR.

Realizing our product can protect equipment from the elements gave us the idea that there is a potential to protect something much more valuable than equipment, human life. Over the past year we have researched exactly what is needed. We initially explored the "Tiny House" market but found that there were several solutions such as "Conestoga Huts" and "Pallet" shelters. It also seemed that this market was really going after the same population that shelters cater to which are the transitional homeless. We shifted our focus to the chronic homeless.

Chronic homelessness is defined as someone that has been homeless for over a year. It usually occurs because of mental illness, substance abuse, or a lack of trust in the system. These individuals would prefer to sleep on the street than in a shelter and are hard for outreach programs to reach. We have created a pop-up shelter, "AquaSHELTER", that can be used in an encampment environment to be the first steppingstone to reach the chronic homeless. Each shelter will hold one individual and a modest number of belongings. They can be assembled and disassembled within minutes and stored on the insulated pallet that also acts as the floor of the enclosure. A small 500W to 1000w space heater will keep the internal temperature in the mid-60° to mid-70°F range eliminating the risk of hypothermia. By providing amenities in the encampment such as toilets, warm meals, and a bathing area it will allow a social worker to start the process of building trust with these individuals.



In light of the current coronavirus outbreak we feel the AquaSHELTER could be used as isolation rooms as well. The overburdening of hospitals is a current risk with very few solutions.



Hospital Beds Per 1,000 People

As confirmed cases of the novel coronavirus continue to increase across the United States — there are, as of March 14, over 2,000 reported cases— one of the biggest issue doctors could face is simply finding space to treat patients requiring medical assistance.

There is some question as to whether the US has enough hospital beds to treat all those who could become infected. Available data on hospital capacity suggests the country does not. According to the Organization for Economic Co-operation and Development (OECD), the US has 2.8 hospital beds per 1,000 people. By contrast, other countries with serious coronavirus outbreaks have more on average: China 4.3, South Korea has 12.3, and Italy has 3.2 per 1,000 people. – The US needs a lot more hospital beds to prepare for a spike in coronavirus cases, vox.com, By Zeeshan Aleem, March 14, 2020
<https://data.oecd.org/healtheqt/hospital-beds.htm>



Infectious Disease Management

How Do Hospitals Train Employees for Infectious Disease Management?

Using Isolation Rooms

Doctors and nurses working in both larger and smaller hospitals must understand the importance of using isolation rooms, including when to use those rooms and how those rooms work. An isolation room is essentially a room set aside from other patients that has its own set of protocols and regulations. Only certain medical professionals can gain access to that room, and they must agree to follow those requirements. When a patient comes into the hospital, the staff can look for signs of any infectious disease and move that patient immediately into an isolation room to cut down on the risk of that patient infecting others.



Lifespan on Different Surfaces

Another study published March 1 in the Journal of Hospital Infection looked at the lifespans of other coronaviruses found in humans on various surfaces. The SARS coronavirus, at a temperature of 68 degrees Fahrenheit (20 degrees Celsius), lasted for two days on steel, four days on wood and glass, and five days on metal, plastic, and ceramics. (The researchers also found that one strain of SARS lasted up to nine days on a plastic surface at room temperature.)

SARS survived for two to eight hours on aluminum and for less than eight hours on latex. – The coronavirus lives on copper for 4 hours, on cardboard for 1 day, and on plastic for 3 days, new research says. Here's how to disinfect these surfaces properly, businessinsider.com, By Aylin Woodward, Mar 17, 2020

[https://www.journalofhospitalinfection.com/article/S0195-6701\(20\)30046-3/fulltext](https://www.journalofhospitalinfection.com/article/S0195-6701(20)30046-3/fulltext)



Materials

- Outside and inside made of .050 5052-H32 marine grade aluminum
 - SARS survived two to eight hours
- Insulation
 - 1.5" closed cell polyisocyanurate foam core in walls, 3" in roof
 - Premium performance coated glass facer on both sides
 - Passes (10) resistance to Mold test ASTM D 3273
 - UL Class A combustible deck assembly rating
- Four 4" circular louvers for ventilation
- 15 Amp 125v AC power inlet port plug with 20" extension cord - Optional



Dimensions

- Interior dimensions 79" length x 50" width x 55" height
 - Allows for a hospital bed on wheels or cot
 - Mount to plywood or sub-floor, can build wood frame to add height
 - Side walls mount to sub-floor with screws through mounting feet
 - Back wall slides down over portion of side walls
 - Roof fits over and latches to the sidewalls
 - Replace bi-fold door with drape that would be held in place by roof
 - Access opening 42" wide



Potential Layout

Basketball Court

106' x 50'

Includes 6' Baseline Each End

