

Passive Cooling Device for Medical Supplies Project - User Stories					
User Story on	As a	I want	So that	Discovery Questions	Conditions of Satisfaction
Core Cooling Functionality	healthcare worker in a remote or off-grid location	a reliable passive cooling device to store temperature-sensitive medical supplies	I can ensure the medications and vaccines remain effective without relying on electricity	1.What temperature range must the device maintain?; 2.How long must the device maintain this range?; 3.How will the cooling be achieved without electricity?	1.Device maintains 2–8°C; 2.Cooling lasts at least 72 hours; 3.Uses only passive cooling mechanisms (e.g., PCM, insulation)
Transport and Portability	field nurse who frequently moves between rural clinics	the cooling device to be lightweight and easy to carry	I can transport it over long distances without additional help	1.What is the maximum acceptable weight?; 2.Is hands-free portability required?	1.Weighs under 5 kg; 2.Comes with backpack or shoulder strap options
Durability	aid worker operating in rugged environments	the cooling device to be impact-resistant and water-resistant	it can withstand harsh conditions during transport and storage	1.What impact resistance is required?; 2.Will the device be exposed to water or dust?; 3.What is the expected lifespan of the product?	1.Withstands 1.5m drop; 2.Water- and dust-resistant (IPX4 or higher); 3.Lasts minimum 2 years with field use
Temperature Monitoring	technician responsible for medicine safety	a visual or digital indicator that shows if the internal temperature has exceeded the safe range	I can identify if the supplies have been compromised	1.Does it need a digital display or temperature indicator?;	1.Includes passive or digital indicator, color-coded status display;
Affordability	program manager in a humanitarian organization	the cooling device to be low-cost and easy to manufacture	it can be distributed widely across low-income regions	1.What is the target manufacturing cost?;	1.Cost under \$50;
Maintenance-Free Operation	rural clinic administrator with limited access to technical support	the cooling device to require minimal maintenance and no power supply	it remains functional over long periods without intervention	1.How often can users access replacement or support?; 2.Can it be cleaned easily in the field?	1.No maintenance for 1 week minimum; 2.Easy-to-clean surfaces with no tools required
Storage Capacity	community health officer transporting multiple vials and ampoules	the device to hold enough volume for a full day's worth of outreach	I don't need to return to the base clinic for resupply	1.What volume of supplies needs to be stored?; 2.How should items be organized inside?; 3.Does the device need compartments or racks?	1.Minimum 3-liter capacity; 2.Internal layout supports vials upright; 3.Customizable or modular compartments available