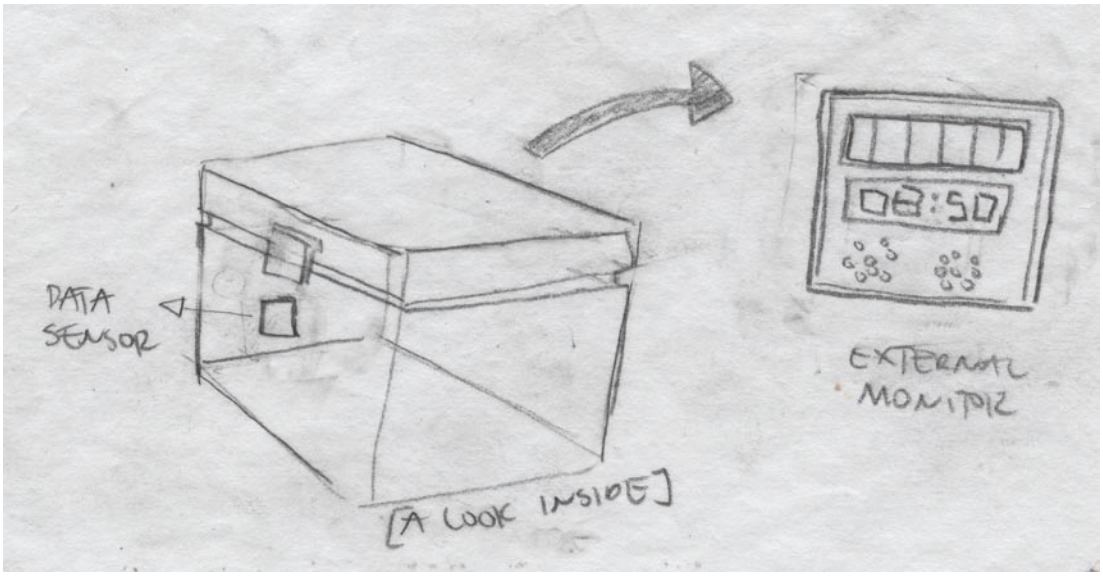
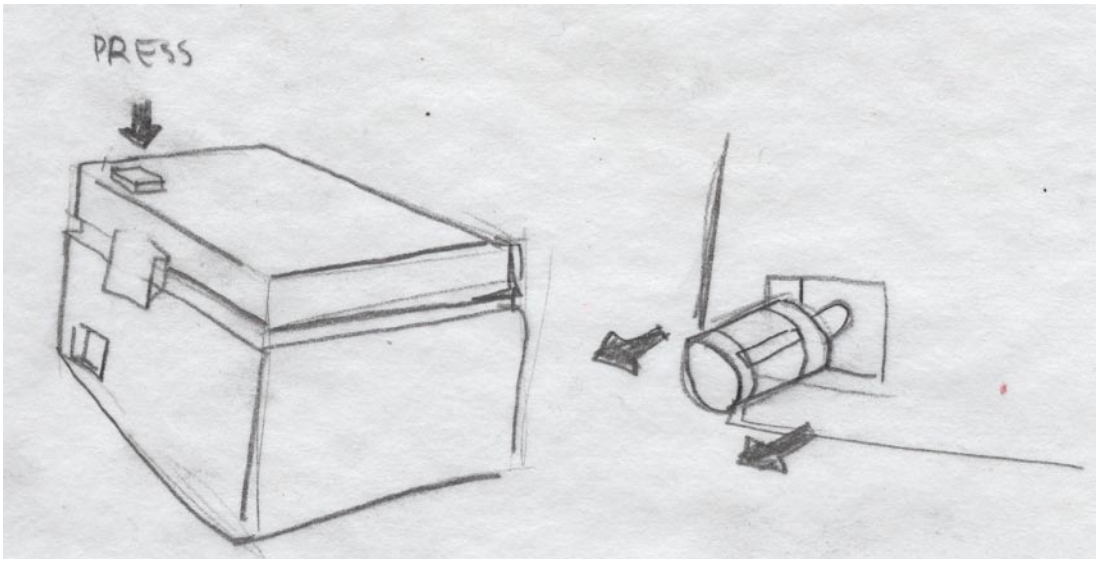
CONCEPT 1: TEMPERATURE LOGGING AND MONITORING



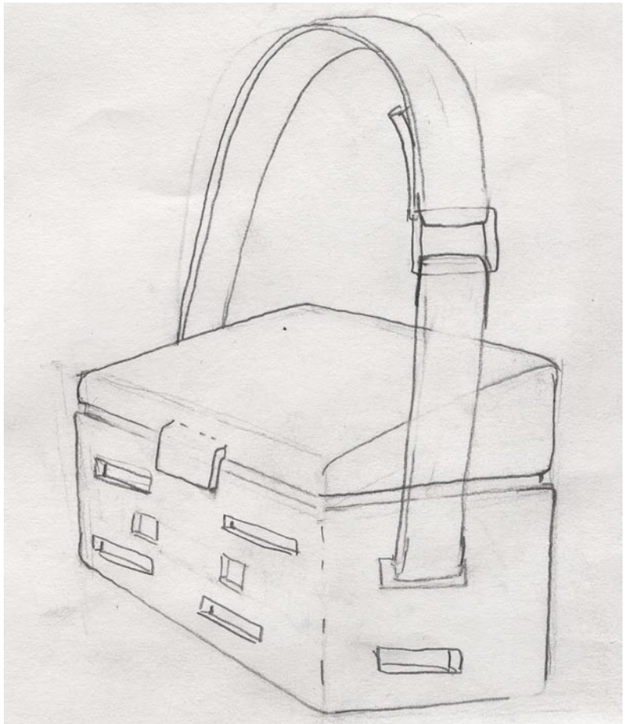
Vaccine transportation goes through a complex cold chain, where a number of players are involved. In order to facilitate the process of temperature log in that is required by WHO standards, and aid in the identification of weak areas within the chain, a temperature monitoring system would be used. A component would be put within the box which would record and transmit data to an external location. Additionally, a simple external indicator would display time and temperature as well as beep to signal a problem in temperature.

CONCEPT 2: VIAL DISPENSER



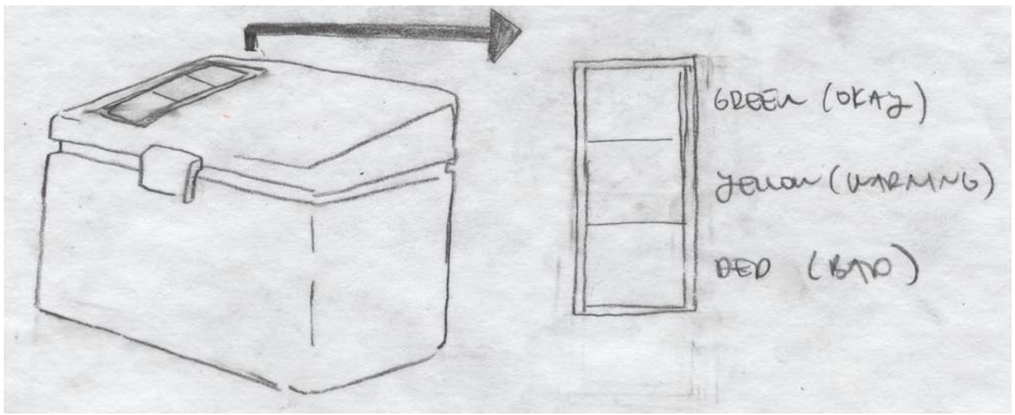
When administering vaccines, the clinical worker must reopen the carrier, risking temperature exposure. With this system, the cooler could retain its temperature for it would not need to be opened after filled with vials, where vaccines would be dispensed for use.

CONCEPT 3: VIAL CARRIER



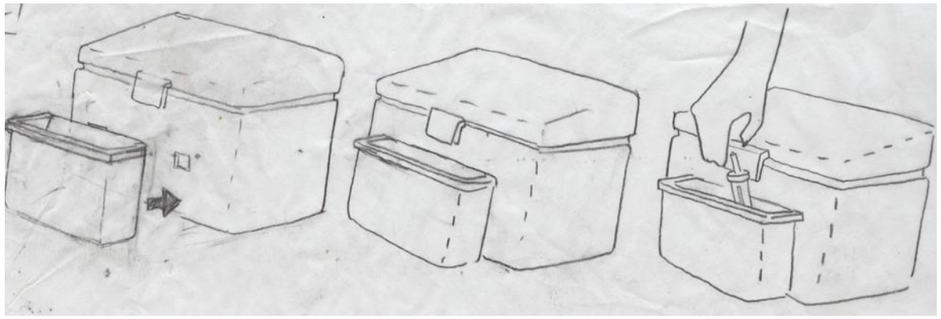
The last leg of the journey is diffiuclt due to the need to traverse long distances to remote locations and the act of administernig the vaccine. Our vial carrier improves on convention, addressing the areas of temperature monitoring, modular components, partitioned storage, and adaptable means of transportation.

A. Temperature Monitoring



An easy to read display would gauge the temperature of the carrier's inside. If green, the temperature is within the designated range, however if yellow is reached, the inside is near the extremes of the limit. Red indicates that the product has gone bad due to temperature exposure.

B. Modular Components

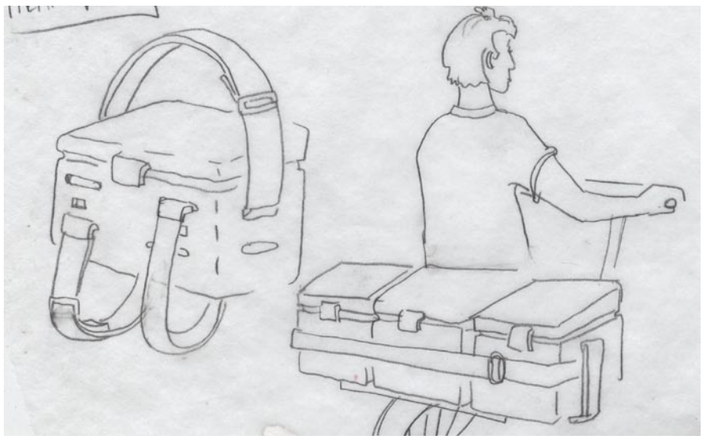


Addressing the difficulty of administering the vaccines, an extra compartment would be able to snap onto the carrier. It could be potentially use for vaccine waste or extra storage.

C. Partitioned Storage

Partitioned storage would protect the majority of vaccines from heat exposure. With such a configuration, a small portion of the box with the vials in use opens up separate from the main chamber.

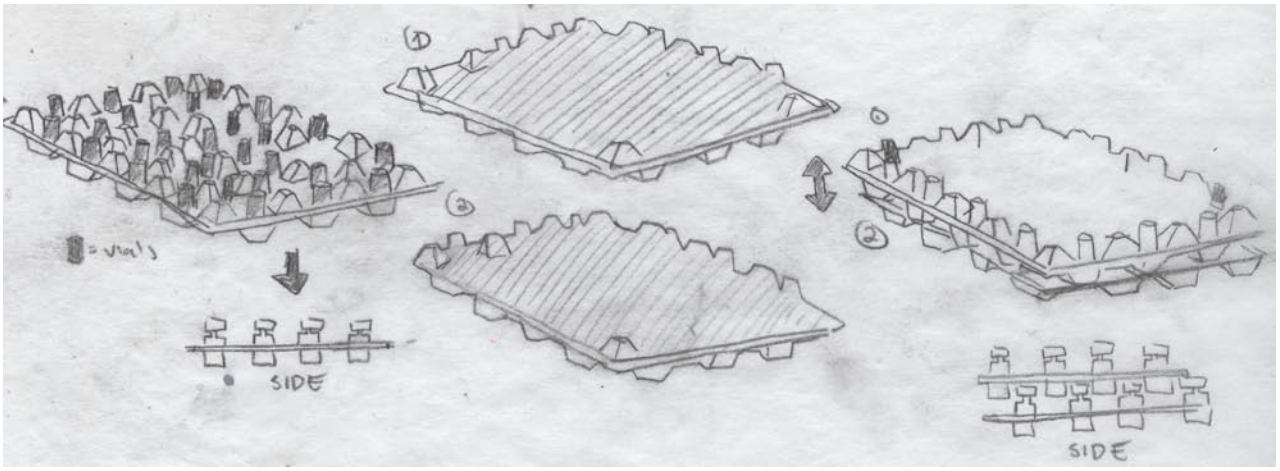
D. Adaptive Straps



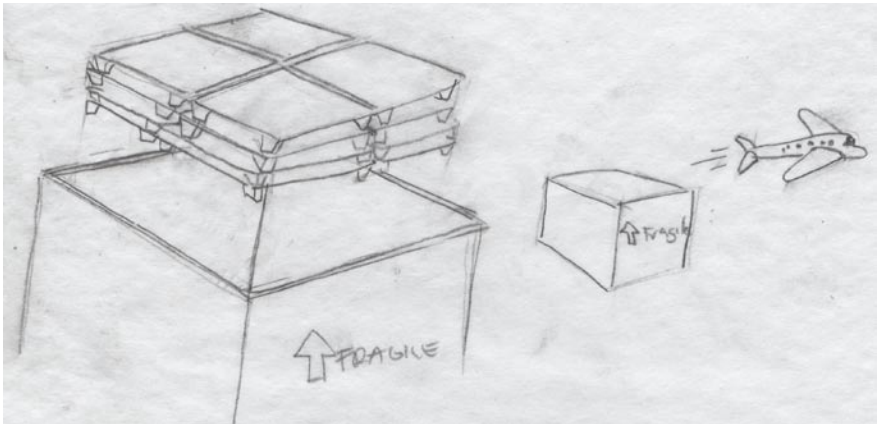
Vial carriers are transported in a number of ways: by foot, car, motorcycle, or bicycle. These straps would move, clip, and adjust to adapt to any situation.

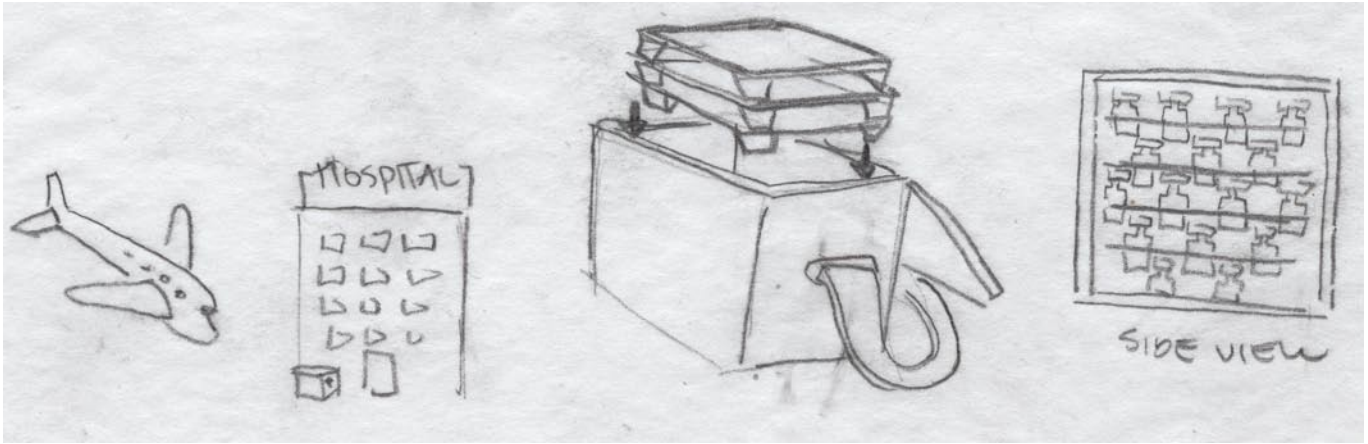
CONCEPT 4: EGG CRATE

A journey for a vaccine requires repackaging and handling at a variety of locations. This packaging would facilitate this process by having the product stay in the same packaging until the end.



The packaging would be disposable, stackable, and made of a material which retains the cold. Many times within the cold chain there are opportunities of spoilage due to problems with infrastructure and management. The latter would help to keep the vials cool if an error were to occur.





The vials would be packaged in a set amount which could stack on top of each other to perfectly fit within a vaccine carrier or beside each other for larger shipments.