

ENHANCING ASSURANCE AND COMPLIANCE FOR LAST MILE SHIPMENTS

NEED:

Many healthcare systems and specialty pharmacies use Seasonal shipping systems where the number of gel packs vary based on the temperatures at destinations, rather than using Universal solutions that can be used year-round when shipping direct to patients. The benefit of modular or seasonal solutions (Hot, Cold or Moderate) is that they tend to be less costly than a universal solution however, it requires providers to choose which seasonal solution to use to ship to various locations, given the temperature and weather conditions, that the shipment will experience along the way.

In most instances, providers use a calendar date-based model on when to ship a particular solution. However, knowing the variability in temperatures, especially during the Spring and Fall seasons, such a model is prone to picking the wrong pack out. This can lead to the package experiencing an excursion and not being able to maintain the required temperature thereby, impacting medication efficacy, potency, and eventually patient safety.

The Biopharma industry loses \$35+ Billion annually to temperature failures (2019 IQVIA study). While this is significant, **even more concerning is the fact that patient safety could be potentially compromised.** It is estimated that 25% of vaccines reach their destination degraded because of incorrect shipping and ~30% of scrapped pharmaceuticals can be attributed to logistics issues alone (CargoSense study).

SOLUTION:



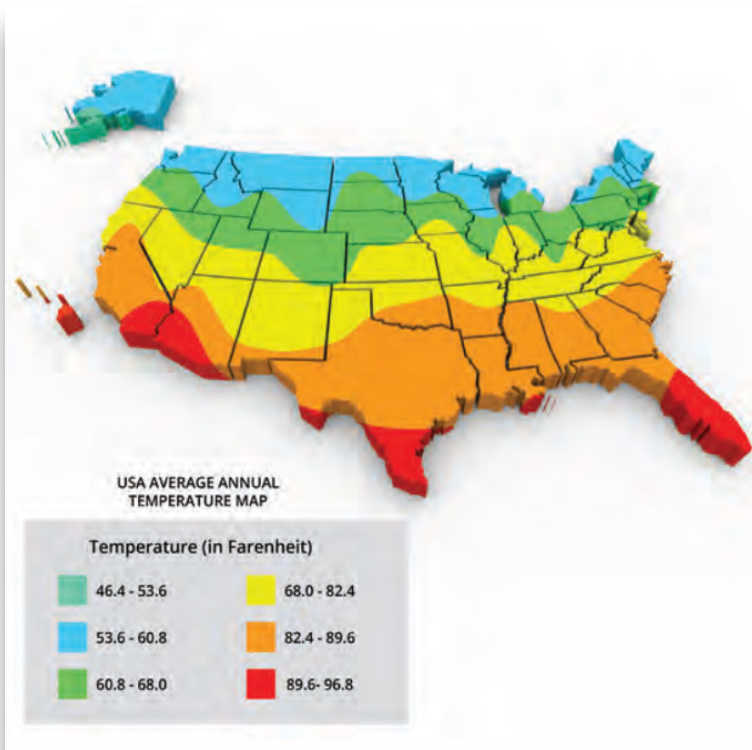
CCT Route Pro™ is a digital tool that allows users to receive a seasonal pack-out recommendation for the CCT Rx shippers based on the shipping method used, shipper origin and destination and payload temperature range (Refrigerated or Controlled Room Temperature). The Route Pro software forecasts the ambient temperature while in transit by analyzing the weather predictions at the origin, transit hub, and destination, as well as known typical durations at those locations. Based on weather at multiple points within a route, Route Pro provides the user with an appropriate seasonal pack out and directions on the number



and type of gel packs needed. The average temperature of the CCT Route Pro generated profile is then used with the sweet spot curve (TSS) for a specific shipper to determine the appropriate seasonal pack-out.

Given that climates vary dramatically throughout the US, using a calendar to determine when to switch seasonal pack-outs can put products at risk, if there are variations in

temperature along the full route. CCT Route Pro takes the guesswork out of pack out decisions to provide assurance that shipments will arrive in compliance.



The benefit of using CCT Route Pro is **increased assurance of selecting the right pack out** which in turn **reduces potential wastage, medication loss and disruption of therapy.**

The other benefits have been a potential shift in pack out selection towards more “moderate” solutions instead of the Hot and Cold ones – **which reduce shipping costs.**

CONCLUSION:

CCT Route Pro™ has been trialed in key specialty pharmacies in the US and all those accounts have seen the above benefits compared to the calendar-date based methodology.

CCT has recently commercialized this application and are proud to share that one of the largest pharmacy chains in the country has adopted CCT Route Pro to help with their pack out selections with extremely positive feedback.



