



Making Every Dose Count

The Benefits of COVID-19 Vaccine Temperature Monitoring

With the most extensive vaccine rollout of our lifetime currently underway, the importance of detailed temperature monitoring has emerged to the forefront. The challenges of the COVID-19 vaccine rollout are unlike anything we've experienced before, in large part due to the extreme temperature profiles of the different vaccine candidates. From ultra-frozen to frozen to refrigerated, each vaccine requires its own set of temperature maintenance standards that are equally intensive and complex. If the proper protocols aren't meticulously followed, irreversible damage could potentially ensue that renders the vaccine unfit for administering.

As the societal effects of the pandemic worsen by the day, we need to make every dose count toward putting a permanent end to the COVID-19 pandemic. No vaccine can afford to go to waste.

In order to immunize the general population as quickly as possible, detailed temperature monitoring is needed throughout the entire cold chain. Temperature Monitoring and Sensing Technology is the only tool that can provide temperature traceability at every point of the cold chain – ranging from shipping containers at the manufacturing and distribution levels down to individual vaccine vials at the point of administration. Leveraging the capabilities of Temperature Monitoring and Sensing Technology is an effective, results-driven approach to cold chain management that can help ensure unprecedented volumes of vaccines are shipped, stored, and managed correctly to the very last mile.

Maximizing Usable Doses with Temperature Traceability

Through detailed temperature monitoring, vaccine distributors and healthcare workers can utilize extensive visibility to maximize the amount of administrable COVID-19 vaccine doses. The three primary forms of Temperature Monitoring and Sensing Technology -- Electronic Sensor Devices, Temperature Indicator Cards, and Vaccine Vial Monitors – all play pivotal roles in temperature monitoring. Electronic Sensor Devices collect temperature readings at specified intervals which are uploaded to the cloud for the creation of reports and graphs that reveal the temperature conditions of containers during transport. The devices can also monitor refrigerators or freezers inside the healthcare facilities and immediately alert employees of potentially harmful temperature excursions before the vaccines become damaged and can't be administered. Temperature Indicator Cards provide simplified visual cues flagging shipment containers and insulated packages, while Vaccine Vial Monitors identify individual vials that were potentially exposed to heat damage.





The condition of every vaccine that arrives at a hospital, pharmacy, or vaccination clinic is then fully verifiable, so healthcare workers responsible for administering the vaccine won't guess about when to discard doses suspected of having heat damage. Instead, insights provided by the Temperature Monitoring and Sensing Technology will enable them to make scientifically based decisions that maximize the number of usable doses that can be administered.

Bridging Cold Chain Gaps with Temperature Awareness

The actionable exposure data generated by Temperature Monitoring and Sensing Technology can be leveraged to identify and address cold chain gaps or loopholes that led to potentially harmful temperature excursions. Since the Electronic Sensor Devices record temperature readings at specified intervals, vaccine manufacturers can use the timing and duration of excursions to perform root cause analysis to determine if the vaccine remains suitable for use, as well as to uncover any external variables that may have contributed to excursions – such as power outages, compliance violations, delayed hand-offs, or ineffective methods of transportation. In turn, they can then make proactive cold chain improvements to minimize the risks of it happening again and further reduce the rate of future vaccine damage. On a broader scale, utilizing multi-level Temperature Monitoring and Sensing tools increases the temperature awareness of every handler on temperature maintenance compliance across the board.

Zebra's Temperature Monitoring and Sensing Technology Drives COVID-19 Vaccine Monitoring

As the global health community takes steps to distribute vaccines to the people who need them most, Zebra Technologies is empowering COVID-19 vaccine manufacturers, distributors, and administrators with Temperature Monitoring and Sensing Technology. [Our innovative product line](#) of Electronic Temperature Sensors, TransTracker® Temperature Indicator Cards, and HEATmarker® Vaccine Vial Monitors, which are manufactured by Temptime Corporation®, is critical for developing detailed vaccine temperature traceability from the large shipment to individual vial levels.

Learn more about [Zebra's Temperature Monitoring and Sensing Technology](#) today!



NA and Corporate Headquarters
+1 800 423 0442
inquiry4@zebra.com

Asia-Pacific Headquarters
+65 6858 0722
contact.apac@zebra.com

EMEA Headquarters
zebra.com/locations
contact.emea@zebra.com

Latin America Headquarters
+1 866 230 9494
la.contactme@zebra.com