Why Monitoring Cold Chain Data Is Not Enough

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In the cold chain logistics industry there's a huge change happening. Lots of data is being gathered by wirelessly connected data loggers, sensors and monitoring equipment. This is sometimes referred to as real-time monitoring or 'near real-time' monitoring. Having all this information is great, and this may contribute to GDP and GMP guidelines for food and pharmaceutical industries, but having too much data may also pose challenges if not managed properly.

For temperature-sensitive products, it is important to have complete detailed history of the products as they travel through the logistics supply chain and in storage. With the continuous monitoring that is enabled by the technology available today, for large fleets and distribution networks, this potentially generates huge sets of data (often called 'big data' in today's software industry).

What's important therefore is that the data is analyzed according to key performance indicators (KPIs) for that particular product. But you shouldn't have to worry about spending time sifting through all of that data. It needs to simply answer questions like "Was the correct temperature maintained at all times?" or, "What is the financial value of the loss resulting from a temperature excursion that happened?" Management doesn't need to see all the data – dashboards related to the KPIs should be quickly accessible. All the management needs to know is whether their delivered product is safe, and to be assured that the detailed data is available as required for reporting purposes.

This is particularly important as the new EU guidelines on GDP provide more guidance on temperature control. In chapter 9 of the guidelines, it is noted that required storage conditions for medicinal products should be maintained during transportation, and a responsible person must be contactable at all times, to provide assurance of product integrity.

Ultimately, the monitoring is carried out to ensure patient safety and food safety. But for organizations like pharmaceutical, food and third party logistics companies, it's how you read and interpret that data that matters. It is also important that this data links into the business intelligence systems overall to provide the assurances required by regulators and end-customers.

That data needs to be presented in a way that assures companies that their products meet GDP and GMP guidelines as well as meet health and safety requirements. It also needs to assure patients of the quality of medicines and food, and to be able to trust that it is has reached them in a condition which is safe to consume.



Personal dashboards can display important KPI metrics

Data monitoring therefore involves more than just collecting the data. Ideally manufacturers and logistics companies should be thinking about data integration – how data is collected, monitored, analyzed and presented; and how it integrates into the overall business intelligence system or ERP (enterprise resource planning) system.

If easy to read dashboards with important KPIs or metrics are displayed rather than just raw data, management is able to focus on their core expertise and not worry about the data collection and reporting aspect. The data can be gathered and analyzed using the appropriate technology, with relevant visual representations to give a clear view of their cold chain performance – without having to delve into large sets of figures. In more simple words, the dashboards should provide you with answers to the questions that are important to your business, instead of just showing the data.