

The Responder

“Progress Saves Lives...”

Edition 55 | April 2023

From the Editor's Desk

Greetings all and a warm welcome to the April 2023 edition of The Responder

Well now, Autumn has definitely arrived in Cape Town. We are only just touching on April and we have already had some fantastic rain and there is a bit of a chill in the air. Autumn and Winter are my favourite seasons of the year. This time of year, also brings the North westerly winds, making False Bay the perfect place to catch a few decent waves. Then finally, the wintery weather also brings the shoals of Cape Snoek into the bay in Cape Town and quite frankly, there is little that can compare to a freshly braaied or smoked snoek. It really is a Capie thing, so our Capetonian readers will know exactly what I am talking about. 😊



March and April are busy periods for us. Our ISO 9001 and ISO 13485 audits are just around the corner and it is usually when my stress levels go from zero to 100 in 6.8 seconds. Our quality certifications are really important to us, because they really do keep us in check to ensure that we are consistent in providing both high-quality products and high-quality services to our clients. It also gives us an opportunity to reflect on what we have achieved over the past year and what improvements need to be made to our systems and processes to ensure that we are continuously doing things better.

For those of you who are working in EMS, you'll know that services have always had a major challenge trying to monitor and control the internal environment of medication bags. If one looks at the array of medications currently on EMS protocols that require a controlled storage environment, I am sure you would agree that temperature monitoring has become a necessity, rather than simply optional. In this edition's article, we will be giving you a brief overview of the NanoTag, which is a temperature monitoring system, generating data that can be accessed via a mobile device from anywhere in the world. It is an excellent tool to ensure that the temperature control measures you have implemented for your services medication bags are effective. Ultimately, the question is, how effective is administering a medication, stored in the boot of a response car, that has been exposed to fluctuating temperatures of as high as 50°C? Food for thought, however if this is of concern to you, have a read and find out how the NanoTag will take the guesswork out of your medication bag temperature control measures.

As always, we have some great specials lined up for you in this edition and we have no doubt you will take full advantage of the savings

With that said, I hope you enjoy this edition of The Responder.

Yours in Healthcare

Gavin Sutton

Editor – The Responder

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New Product Showcase

The NANOTAG Temperature Monitoring Device

Ever wondered just what sorts of temperatures the medications in your drug bags are exposed to during a hot summer’s day in South Africa? Although as manufacturers of premium quality jump bags and drug bags, we try our best to build as much thermal insulation into our designs as possible, however when temperatures reach as high as 55°C in the boot of a response car, it proves a challenge to even the most well thought out designs. We are currently evaluating a range of materials, to find out how we can improve on thermoregulation throughout our drug bag range.



Something we have found when chatting to Emergency Services across South Africa, is that consistent and accurate temperature monitoring of drug storage bags or even non-temperature-controlled drug storage cabinets at bases, is almost non-existent or largely inadequate. In many cases, temperature monitoring consists of using standard thermometers or infrared thermometers at the beginning of shifts and in some cases at the end of shifts. Although this may provide some data, it doesn’t provide you with constant real time data, that would allow you to respond and action a high temperature, that could alter the efficacy of certain medications in your drug bag.

The South African Context:

An interesting observational study that was published in 2021, “Medication storage in Emergency Medical Services: Temperature ranges from a South African sample” [Wylie, Craig & Rambharose, Sanjeev & Ebrahim, Ismaeel & Hickman, Nicky & Wallis, Lee & Stassen, Willem. SAJPEC. 10.24213/2-1-4480. (2021)], provides an excellent overview of how wide a range of temperatures our medications are exposed to across South Africa.

In the study, the authors “placed a continuous temperature monitoring device in the medication storage room, the response vehicle drug bags, and an ambulance at a single private EMS base in Cape Town, Johannesburg, Durban, and Potchefstroom. Temperature data was recorded in fifteen-minute intervals. The data was extracted after six weeks and subjected to descriptive analysis. Data was also analysed in six hourly strata to account for daily temperature variations. Results: A total of 36 002 temperature readings were recorded during the study period. The mean (range) temperature across the four bases was 25.4°C (13.1–56.8) for ambulances, 25.7°C (13.3–49.1) for primary response vehicles, and 24.4°C (17.3–33.9) for medication storage facilities. The highest mean (range) temperatures, of 33.7°C (20.4–47.9), was recorded in a Johannesburg-based primary response vehicle between 12h00 and 18h00”.

“Very little is known about medications’ stability profile in the pre-hospital setting, especially when subjected to significant variation and high temperatures. It has been suggested that medication such as



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morphine will maintain its efficacy outside the recommended 25°C limit. In the case of midazolam, degradation was reported independently of temperature, whereas atropine and naloxone showed significant degradation at high temperatures. While the effect of such degradation on drug efficacy and patient safety is yet to be determined, it is essential that policymakers implement strategies to either procure medications that are more stable (where possible) or develop and enforce policy to allow for stricter temperature control”.

After engaging with various government and private emergency services around South Africa, we have found that many services have in fact realised that consistent monitoring of the temperatures at which medications are stored at, is pertinent to the delivery of quality healthcare. You can have the most advanced patient care and medications protocols in the world, but still deliver sub-standard care if you do not look after and maintain the efficacy of your medications. With similar challenges faced by many services, it's clear that the biggest hurdle is finding the correct device to be able to meet the temperature monitoring needs of services. This is why we are REALLY excited to introduce you to the Thermologix Nanotag temperature monitoring system.

Nanotag is an affordable, highly accurate, and easy-to-use temperature monitoring system that allows you to remotely monitor and record the temperature readings of a range of environments, from anywhere in the world. All that is required is an eNanoTag device (which is placed in the drug bag you wish to monitor temperature in) and access to the network. Thermologix devices communicate through LoRaWAN. The LoRaWAN protocol is a Low Power Wide Area Networking (LPWAN) communication protocol that functions on LoRa (Long Range Radio). For areas that do not have high LoRaWAN coverage, i.e., a rural ambulance station, a NanoTag gateway can be installed at the base, which will then allow multiple NanoTags (placed in various ambulance and response car drug bags) to communicate with it. Whenever an eNanoTag passes through a coverage area, temperature data will automatically be downloaded to the server, which in turn can then be accessed from any mobile device or PC. This means that multiple eNanoTags can be monitored by multiple people 24/7.

Benefits of using the NanoTag System:

- Easy to install and use
- Long range remote connectivity
- Temperature monitoring range from -30 to 60°C
- An ENanoTag has a battery lifespan of up to 1 ½ years, a first for the industry
- eNanoTags are water and dirt resistant
- Temperature data recorded and captured every 10 minutes (or as per your requirements)
- Simply scan the barcode on the back of an eNanoTag to add it to your network
- Real-time temperature monitoring

We believe that this system is a gamechanger Drop us a mail today to find out how NanoTag can help you make monitoring the temperatures in your Emergency Services drug bags, effortless.

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Specials

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R70.00 Inclusive of Vat per pack

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