

# Pre-Hospital Emergency Vehicle and Equipment Hygiene

The issue of ambulance/ pre-hospital emergency vehicle hygiene is by no means a new one. When perusing through a number of articles and papers, it is quite clear that it is an issue of concern in both first world and developing countries alike. In several reports, indications are that emergency services (EMS) worldwide are putting vulnerable patients at risk by exposing them to a catalogue of hygiene problems before they have even reached the hospital.

During the inspection of a well known ambulance service in the United Kingdom it was found that medical equipment that should have been thrown away after single use was 'cleaned' and re-used and some ambulances checked by the team had not been thoroughly cleaned and were 'visibly dirty'. They also found that not all of the ambulances checked were carrying hand detergent wipes, which are considered to be a key element in stopping the spread of superbugs. Stretchers, ventilator units and defibrillators were also found to be dirty. The question is, "what is the state of hygiene in our own ambulance services here in South Africa?"

In research conducted South Africa in 2008 over a twelve month period it was found that above 60% of sites swabbed in EMS vehicles had bacteria present before cleaning and 50% after cleaning. In some instances, areas such as steering wheels had a greater degree of contamination after cleaning. This is a major concern as it indicates that there is a great potential for the cleaning equipment itself to be a major source of contamination.



## Several factors significantly increase the risk of cross infection in Emergency Medical Service Vehicles:

- Lack of an 'implemented' emergency vehicle hygiene policy – A policy may look good on paper, however, how well is it implemented? How is it monitored? Are hygiene standards monitored by eye or by intermittent lab testing? Is there a continuous quality management process implemented which monitors trends and makes adjustments to current policy?
- Lack of regular hygiene training – All EMS personnel have received training on emergency service vehicle hygiene at some stage of their careers. Training however should never be a once off occurrence. Crews must be educated on safe working procedures and occupational risks to patients and their own health, particularly in respect of transmission of infection. Regular refresher programmes reinforce the importance of ensuring high levels of emergency vehicle hygiene.
- Workload demands prevent a thorough cleaning routine - In all notable research, heavy workloads and reduction in call to call times to improve response times have been given as the main reasons for generally poor EMS vehicle/equipment hygiene. This is a sad reality and a fundamental shift has to take place in how ambulance hygiene is approached which seems, at first glance, a pretty simple strategy to adopt.
- Inadequate access to disinfectants and cleaning aids – It sad to still consider this as a major factor in poor EMS vehicle/equipment hygiene as there has been a marked increase in the availability of EMS specific hygiene products.

Over the past many years in South Africa, quality of service has largely been measured in terms of response times. It is true that call time and more specifically scene time, has been shown to impact on patient outcome. It is perhaps a sad reality that by significantly reducing call to call time, we dramatically reduce the time available to practice good emergency vehicle and equipment hygiene. It is also true that by reducing quality of hygiene we impact on the health care system by directly increasing the number of Health Care Associated Infections (infections acquired in a health care facility).

It is estimated that the cost of Health Care Associated Infections costs the South African health care system in excess of R165 million yearly for additional hospitalisation days only. This is based on a conservative infection rate of 5%. If we were to look at a more realistic 15% infection rate, the figure would rise to above R500 million annually. In a health system which is already underfunded, imagine what an additional R500 million could do in terms of providing basic health care services?

PAM Marketing, Be Safe Paramedical's sister company markets a highly effective range of infection control applications called Trigene. These are currently being used extensively in both the pre-hospital and in-hospital environments with excellent results. Additional information on these products, including a disinfectant procedure can be viewed at <http://www.be-safe.co.za/index.php/news/36-ambulance-hygiene-rationale>



Written by: Gavin Sutton

[www.be-safe.co.za](http://www.be-safe.co.za)