

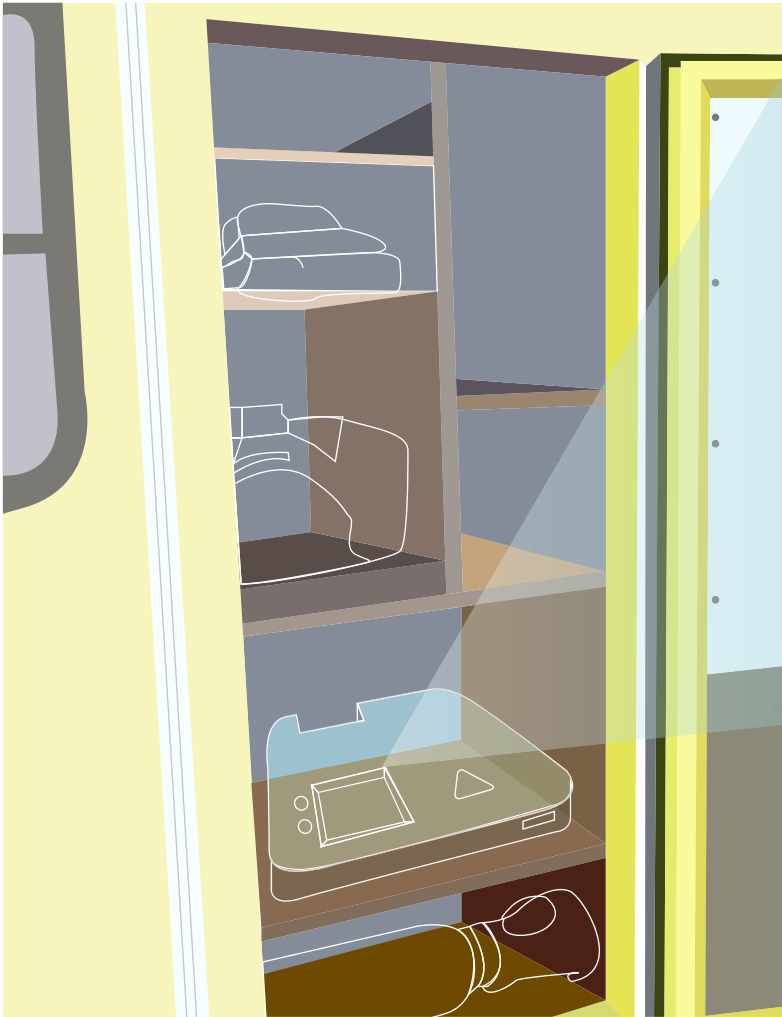


VITALS

A Weekly Safety Newsletter For Medical Transport Professionals

Mike Szczygiel (Segal)
888-969-8033
meszczygiel@thomcoins.com

Human Factors & Technology in Medical Transportation



To write that technology has a large presence in Medical Transportation is an understatement. The sophistication of monitor/ defibrillator/ transcutaneous external pacemakers that also measure oxygen saturation, end tidal carbon dioxide and send telemetry is obvious. Even providers who don't ordinarily provide patient care may find themselves in circumstances where their use of an AED is necessary. The proliferation of GPS, onboard monitoring systems, electronic medical records and a variety of dispatch systems makes it important to think about how our personnel will interact with any piece of technology. Some of the concepts used with assessing medical devices may be applied to technology in general. It is important to note that the application of any technology signals the intention of improving performance.

Human factors science is used to determine how people interact with technology. The goal of this determination is to reduce the likelihood of error or injury, i.e., improve workplace safety. Since multiple types of devices may be used simultaneously under less than ideal conditions, visual, auditory and tactile considerations are important.

Visual considerations require that the user can easily see the device displays, labels and markings clearly in the work environment. Font size should be large enough that all users can read it. **Auditory considerations** are critical for any alarm. Can the alarm be heard easily and is it easy to interpret? For example, can the seatbelt alarm, brake alarm, smoke alarm, driver performance alarm and heart rate monitor alarm be readily distinguished? Are the sounds appropriate in volume, frequency, tone and pitch? Does the alarm give the user enough time to respond? **Tactile considerations** basically involve touch. Can the device components be put together easily? Are there signals, such as clicks, that let the user know when an adequate connection has been made? Is it easy for the user to feel knobs, buttons, switches or keypads?

Is the product suitable for the work environment? Are cleaning and maintenance understood by all users? Is there a mechanism in place for promptly reporting and rectifying problems?

Thinking about these things before you implement any technology will help you use it in a safer fashion.

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