

SAFETY BULLETIN

Ensure your Team is Prepared!

Safety Vigilantes and New Technology

New technology comes with new safety concerns. Even the best intentions have unintended consequences. In the medical world antibiotics are a great example. Strong antibiotics have the unintended consequence of producing more resistant strains of bacteria.

High Reliability Organizations study every downside to technology before embracing change. Once new technology is implemented in the work place, High Reliability Organizations monitor the process to assure no risk has been overlooked.

Over the last three decades firefighters have enjoyed significant technology improvements in turnouts. Today's turnouts are able to protect firefighters at much greater temperatures for a longer duration than in the past. With the current quality of turnouts provided to our firefighters, one would think injuries associated with Personal Protective Equipment would be significantly reduced. NFPA data suggests that is not the case. In fact, not only has there been little change in the number of injuries associated with turnouts, the severity of injuries has increased.

Manufacturers of this new technology met their goals of developing turnouts that are a significant improvement over predecessors. Yet firefighters are still suffering serious injuries related to turnouts. The question is why? An interesting phenomenon is that with better gear firefighters push the limits further - in fact beyond the manufacturers intended use. The manufacturers improved the turnouts so they shed more heat for a longer time in order to create a margin of safety for firefighters in today's built environment. During fire attack today's firefighters increase their risk of injury by exposing themselves to greater heat for longer periods of time. The result is that when the turnouts fail the injury is more catastrophic than with the last generation of personal protective equipment. Recent injuries and deaths have received national attention when face shields suffered catastrophic failure due to the extreme heat environments that firefighters were unable to enter in prior evolutions of Personal Protective Equipment.

Have you ever noticed that after new more stringent safety rules are mandated that injuries become more frequent, or how injuries increase after new and better safety equipment is introduced? High Reliability Organizations restrict misuse and/or over use of new technology.

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