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PROTECTION

Rethinking respiratory safety for modern threats

How lessons from COVID-19 are shaping the next evolution in PPE for law enforcement, fire, EMS and corrections

POLICE1) FIRE RESCUE1) EMS1) CORRECTIONS1)

When the COVID-19 pandemic started, it significantly affected the way first responders did their jobs. When a law enforcement officer was moments away from catching a suspect on the run and was going to be physically near them, the threat of contracting the virus was very real. When fire or EMS crews arrived at the scene of a car accident, the urgency of treating critical patients was laced with the thought of possibly getting sick. Also for corrections officers who frequently needed to interact with inmates, COVID-19 complicated their every move.

For much of the pandemic, first responders protected themselves by using face masks, although the type of mask used and its corresponding level of efficacy varied widely. In some parts of the country, responders donned full-face respirators, as these offered the maximum amount of protection possible.

As time went on, those who were infected once already had some level of immunity, and as people learned more about how the virus spread, a less daunting approach to face protection emerged.

Many gave up their full-face PPE and switched to N95 masks or, in some instances, single-use masks that could be found at the nearest grocery store. These single-use masks were sometimes worn multiple times, while others donned homemade face coverings, surgical masks or other counterfeit items that made their way to the market.

While COVID-19 is still a global threat, it certainly isn't affecting individuals in the way it once was.

It's been argued that full-face respirators offer more protection than required, and while they might have worked to prevent responders from contracting the virus in public, densely populated spaces, they also had the tendency to incite fear among members of the public due to their militant look.

Yet an N95 mask wasn't always the best choice in the early COVID-19 days either, as counterfeit versions of these masks infiltrated the market and differing opinions emerged about their effectiveness in filtering out virus particles. This type of PPE could have been deemed by the public as an insufficient level of protection, too, creating a challenge when determining how exactly to balance functionality with perception.



“Since most masking restrictions have become significantly more relaxed, public safety agencies have had the opportunity to re-evaluate what level of respiratory protection is most appropriate should another pandemic – or similar public health threat – emerge.”

Public safety agencies have largely concluded that protective equipment, particularly respiratory protection, must be adaptable and scalable to emerging public health threats while at the same time considering the impact such PPE has on all members of the public – from those who are vulnerable to a virus to individuals who may commit an act that prompts first responders to arrive in the first place.

Protecting against more than just COVID-19

Unfortunately for public safety agencies, it's not just another pandemic that needs to be considered when choosing respiratory protection. When the term "face mask" is brought up, the first scenario that comes to mind for many is a crowd control environment where riot agents may be used.

At the height of the pandemic, many metropolitan areas grappled with these situations, and more often than not, full-face protective gear was employed. When combined with other tactical gear, these types of masks painted law enforcement officers in what some would describe as a threatening light, again due to their militant look, perhaps causing more of an upset among some members within a crowd. The burden on law enforcement was huge, not only from a cost perspective but also considering the added effort needed to store the gear and be able to deploy it quickly.

Fire and EMS crews were also subject to wearing this type of PPE when tending to those who were injured, which sometimes had the negative effect of positioning them as targets for rioters when all they were doing was trying to help.

Riots have certainly not stopped since the pandemic has waned, making it imperative for public safety agencies to determine if full-face masks are always the most suitable option. However, public disturbances are just another of many instances where the balance between protection and perception must be addressed.

Contagious and riot agents aside, many in public safety are exposed to another type of airborne



threat, some that could be potentially fatal if inhaled – narcotics. Whether a law enforcement officer is conducting a traffic stop, fire and EMS crews are responding to a possible overdose or corrections officers are searching a cell for contraband, all first responders could be put in harm's way if they were to inhale drugs in powder form.

A solution to fill the capability gap

Every situation described above is one a first responder could very easily encounter on any given day, making it critical to have a plan in place for respiratory protection. Yet among the common options available, there remains a critical gap.

Choices like N95 masks or even dust masks might be appealing due to a lower cost, but the protection they offer may not be sufficient, especially when it comes to harmful agents or viruses and bacteria. Even when paired with safety goggles, which can bring their own set of integrational challenges, first responders may be putting themselves in danger if this is the only PPE they wear.

The other end of the spectrum, which includes full-face gas masks or SCBAs, comes with a significantly higher cost, making them a prohibitive option for smaller or volunteer agencies. While full-face masks offer a high level of protection against airborne threats, providing them to those in large departments creates a scaling challenge and may not always be the right choice in certain situations.

So what lies in the middle of the respiratory protection spectrum? Born from lessons learned from the COVID-19 pandemic, the [MITR-M1](#) by [Avon Protection](#) offers public safety agencies an ideal option that strikes a balance between efficacy and public perception.

The MITR-M1 is part of a modular system, bridging the capability gap between basic masks and full-face gear. As a half-mask option, it protects first responders from viruses, riot control agents and narcotics while also making them more approachable in the eyes of the public. Rather than risking exposure to any number of airborne threats or donning alarming tactical gear, the MITR-M1 allows first responders to focus on their top priority – serving the public.



What makes the MITR-M1 different

Unlike other types of respiratory systems, the [MITR-M1](#) was designed specifically for first responders, ensuring it provides features that help those on the front lines do their jobs without being hindered.

If other tactical equipment needs to be worn in conjunction with the MITR-M1, its low profile offers easy integration without compromising protection. It can be worn alone or under a helmet or baseball cap using a harness system, or attached to a helmet without needing a chin strap extender. First responders can don and doff the MITR-M1

via a quick connection system, allowing them to continue wearing their helmet when needed.

Law enforcement and corrections officers can wear the MITR-M1 under many circumstances, even when needing to use a firearm. The filter can be configured for either the left or right side of the mask, offering a lower profile and an unobstructed view for accurate weapon sighting. A utility port provides the ability for comms to continue seamlessly via Push to Talk (PTT) and fielded radios. This communication benefit is critical, especially when situations are quickly evolving, and is harder to integrate when wearing a single-use mask.

“MITR-M1 is compact enough to fit in a gear pouch or cargo pocket and its lightweight design makes it easy to carry, allowing first responders to deploy it quickly rather than having to run back to a patrol vehicle or rig to retrieve their PPE.”





New features to enhance safety

The [MITR-M1](#) has been released with a particulate filter, the MITR-PF particulate filter, which protects against a wide range of airborne threats with 99.97% filtration efficiency. New in the fall of 2025 is a second filter type, the MITR-RF riot filter. This additional option provides protection specifically for riot control agents, and both filters can be interchanged quickly to meet the operational demands of evolving situations in the field.

Adding even more protection is the MITR-PG1 powered goggle, also new in the fall of 2025. Unlike standard safety or ballistic eyewear (i.e., glasses and goggles), a filtration system works to prevent contamination from entering the eye area and positive pressure continuously purges the air within the goggle. An integrated blower prevents the visor from misting while worn, a key element when situational awareness is critical. The visor is completely clear and features the same ballistic properties as other ballistic eye protection, making it ideal for use in riot situations as well as when dealing with individuals who may be armed.

While the MITR-PG1 and the MITR-M1 can certainly be worn separately depending on the situation, they are designed to work as a system together, offering total protection from viruses and other airborne threats. Unlike single-use masks, the system provides a high level of protection each time it is worn.

Uncompromised respiratory protection now and in the future

First responders decades ago would have never predicted the COVID-19 pandemic to change public safety in the ways it has, and there's no way for anyone to know when another global health threat may emerge.

No matter what the future holds, the MITR system offers scalable protection for public safety agencies looking to invest in affordable, efficient and durable mouth, nose and eye protection with new modules continuously being developed. It's critical that members of law enforcement, corrections, fire and EMS take the time now to create a plan to protect themselves from low- to mid-level threats without creating undue concern among the public. **P1** **FR1** **EMS1** **C1**

ABOUT THE AUTHOR

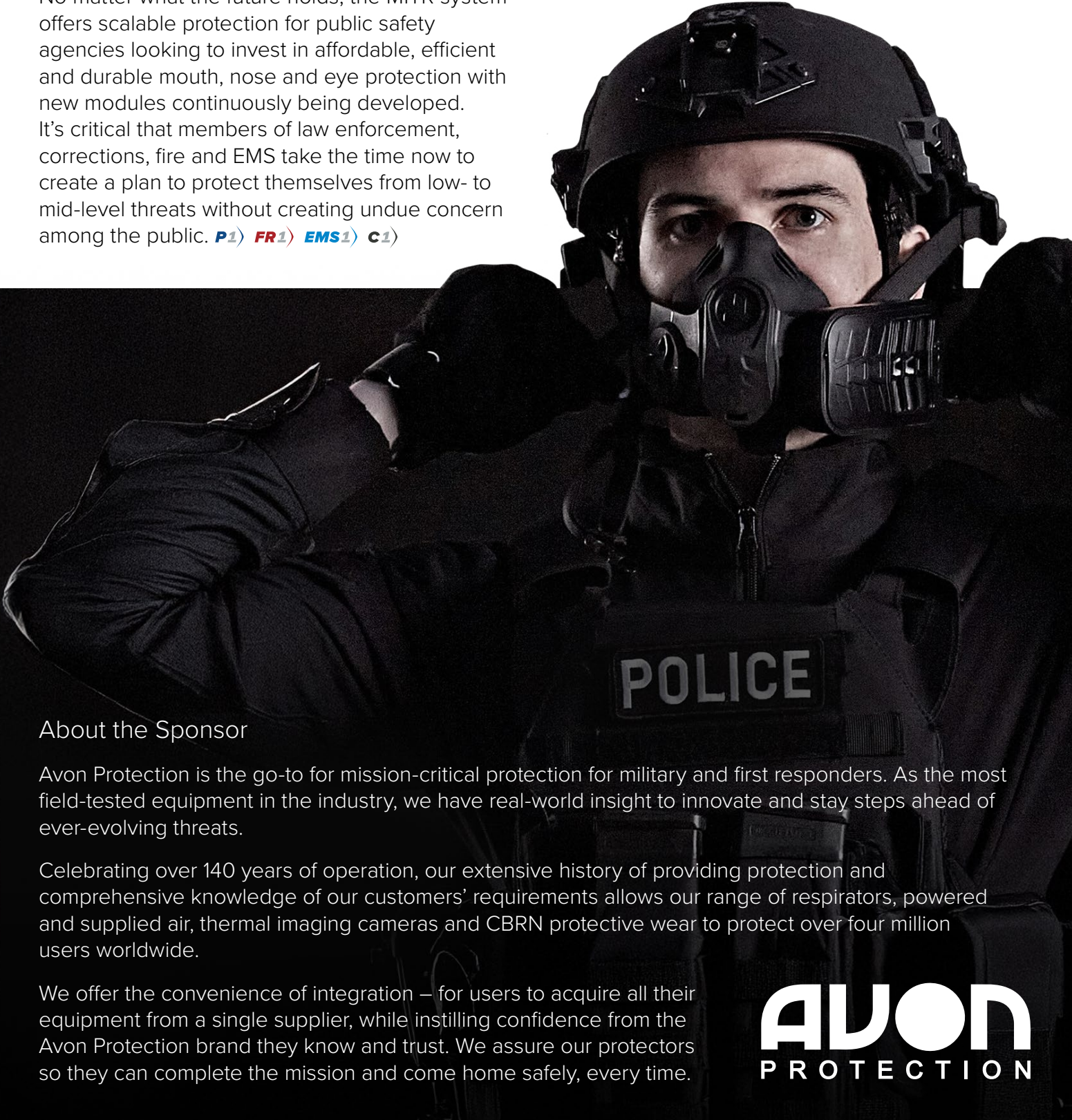
Courtney Levin is a Branded Content Project Lead for Lexipol where she develops content for the public safety audience including law enforcement, fire, EMS and corrections. She holds a BA in Communications from Sonoma State University and has written professionally since 2016.

About the Sponsor

Avon Protection is the go-to for mission-critical protection for military and first responders. As the most field-tested equipment in the industry, we have real-world insight to innovate and stay steps ahead of ever-evolving threats.

Celebrating over 140 years of operation, our extensive history of providing protection and comprehensive knowledge of our customers' requirements allows our range of respirators, powered and supplied air, thermal imaging cameras and CBRN protective wear to protect over four million users worldwide.

We offer the convenience of integration – for users to acquire all their equipment from a single supplier, while instilling confidence from the Avon Protection brand they know and trust. We assure our protectors so they can complete the mission and come home safely, every time.



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