NSW Police Force

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Multi threat light armour vest

Examination of one year of incident data revealed that attack from sharp weapons (knives and similar) was a real risk for our officers. This prompted the Operational Safety & Skills Command to test the capabilities of the current armour to see if the prevailing operational risk was commensurate with the protection provided.

overview

The Operational Safety Unit is a research and development body within the Operational Safety & Skills Command of the NSW Police Force.

The aim of this unit is to ensure officers have appropriate equipment and uniforms to conduct their operations as effectively and safely as circumstances allow.

Recently, an analysis of 12-months of firearm and sharp weapons data found there was a real risk to officers from sharp weapon attacks.

To work out if the operational risk was commensurate with the protection provided, the Operational Safety & Skills Command reviewed of the capabilities of existing armour. This review led to the introduction of new multi threat light armour.

background

Preparations for the tender process commenced within the Operational Safety Unit in 2013. A large amount of research was carried out to identify and select the best body armour to both minimise the risk of injury while also providing adequate mobility.

Needs assessment and evaluation methodology

To determine if there was a need to alter the specifications of personal armour, the following questions were analysed and answered.

What are our current operational risks? Statistics showed that officers were four times more likely to encounter a sharp weapon than a ballistic projectile while performing their duties.

Tests conducted on existing armour revealed that it was extremely vulnerable to stabbing by sharp weapons.

What are the take-up and ongoing wear rates? A low take-up/continued wear rate was identified and attributed to three major issues: weight, heat build-up and general discomfort.

Is the take up rate acceptable? The low take-up rate was deemed unacceptable. It was decided that a more flexible design approach could result in increased wear.

Is there supporting data/information? Analysis of one year of firearm and sharp weapons data found there was a real risk to officers from sharp weapons (including knives etc.). Additional analysis was also conducted on data from the US relating to officers who were shot, and survival rates with and without armour.

What is the potential cost of this new tender if the take up rate increases? The potential cost of the new product was substantially more per item with a probable higher take-up rate.

What policy should be adopted regarding wear? The Office of General Counsel agreed that any officer who requests armour will be issued with it. All officers are also required to view an information package that will enable them to identify the vest capabilities and their individual risk factors.

What is the correlation between risk mitigation and protection level requirements? According to study and operational experience, the higher the protection level of armour the more mobility is restricted. Potential load carriage system improvements were also a project consideration.

the journey to change

To address the identified issues and provide specifications for new armour, the following activities were undertaken:

The current overt and covert armour were tested using the US National Institute of Justice standard as the benchmark for protection effectiveness. COPS data was obtained assessing the likelihood of encountering firearms and/or sharp weapons operationally.

Consultation with the users was also undertaken to gain perspective on operational needs and functionality requirements. The results were presented to the Commissioner's Executive Team to

determine the current risks and funding requirements. Here, a substantial rise in cost per item with a probable higher take up rate was found. Without Commissioner sign off, no further progress could be made.

The new armour consists of an Integrated Light Armour Vest (worn over the shirt) and a Covert Light Armour Vest (worn under the shirt). The duo feature better ergonomics and more flexibility than previous armour.

Statistics showed that our officers are four times more likely to encounter a sharp weapon than a ballistic projectile while performing their duties.

Following a communications process with officers regarding the armour upgrade, there have been numerous issue requests.

It has been determined that the issue process would need to take effect over two financial years, given the size of the police force (over 16,600 operational officers). This would achieve two things: less financial drain by spreading the cost out over 24 months, and a constant flow roll out.

A two-phase quality assurance process is now in place to ensure product quality is achieved and maintained.

results

To gain unbiased information and feedback during each phase of testing, operational police with no experience or expertise in body armour were used as test subjects. The results of the testing were then compared to scientific data provided by Bond University. This data from Bond University, coupled with operational testing and officer feedback, found the new vests offered greater protection than previous armour.

An electronic education package about the armour and weapon risks has been made compulsory viewing for all NSWP Force Officers. This package is designed to help officers make an informed decision about the armour.

challenges

The challenge now is the distribution process. The focus will be on ensuring every officer is fitted correctly and undertakes mandatory functionality training to ensure they get the best possible advantage from the new armour package.

future strategies

Opportunities now exist for the ILAV to be developed for use across other areas of policing. This project has overlap with a major uniform project which, while running separately to the ILAV project, is now at the stage where integration will occur.

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