

## Blue Lights and Sirens

**H**ardly a month goes by without the media reporting on a police related road traffic incident (RTI).

According to a recent Independent Police Complaints Commission (IPCC) report, there are approximately 40 police RTIs a year in which members of the public die. These RTIs are more likely to occur when officers are responding to an emergency call or pursuing a vehicle that has failed to stop.

This type of pursuit incident generally involves young male drivers fleeing from the police, and they are commonly inexperienced drivers, uninsured and, quite often, already disqualified from driving. On top of this, the most common time for pursuits to take place is in the evening and, especially, over the course of the weekend. These are times when people are more likely to be socialising and, potentially, impairing their senses by consuming alcohol and drugs.

The majority of pursuits are initiated for traffic violations or offences and where drivers of the pursued vehicles were driving in a dangerous or reckless manner before the pursuit began. Of course, being pursued may sometimes lead to an escalation in risk taking on the part of the fleeing driver and, therefore, increase the chance of someone being seriously or fatally injured.

### The Evidence

Emergency response incidents make up a smaller proportion of police RTIs, but they are a source of concern for both the general public and the police service. The people who are seriously injured or killed in this type of incident will generally have been struck by a police vehicle travelling at high speed and may well have been unable to take any avoiding action. Unfortunately, little research has been conducted into the nature of these incidents, focusing on police pursuits instead. Putting all this into some kind of perspective (and whilst data is not accurate) an IPCC report suggests that between 1 and 8

police pursuits out of every 1,000 lead to a death or serious injury. For officers driving on an emergency call, the estimate is even lower, with less than one incident involving death or serious injury for every 100,000 emergency calls. This could be considered a reflection of the high level of police driving skill; however, there is no room for complacency. Everything that can be done, must be done, not only to protect the public, but also the police officers as they carry out their duty in maintaining law and order.

### Cognitive Skills in Blue Light Driving

Research suggests that when mistakes are made in blue light driving, it is more often due to poor decision making rather than poor vehicle handling skills. Police drivers are expected to drive with the highest level of awareness and skill, but good decisions cannot be made without accurate information. The ability to identify situations that may require some form of avoiding action at the earliest possible opportunity, such as changing speed or direction, is clearly an important skill in blue light driving. It is a skill that is heavily dependant on perceptual skills, such as appropriate visual scanning, reaction speeds and cognitive skills, such as interpreting traffic cues to anticipate that a hazard may be

about to unfold.

At high speeds, police drivers must scan their surroundings, gather relevant information and maintain high levels of concentration. They also need to be capable of efficient multi-tasking - making sure they have an accurate idea of what is happening both inside and outside the police vehicle. Vital information on the police radio can be critical to making sure decisions are based on up-to-date information. Police drivers also need to use their skills and experience to predict what will happen in order to make appropriate judgements about risk and the right decisions on appropriate actions quickly. Skilled and experienced police drivers learn to select the most relevant information and stay focused on the most important tasks but, for inexperienced officers in particular, there are several information processing limitations that dramatically impact on their decision-making during a blue light run.

### Limitations of the Human Brain

The accuracy and capacity of information processing can be severely limited in blue light driving for many reasons. The human brain is capable of carrying out lots of complex tasks at the same time, but when demands are high, as is the case on response or pursuit, available brain resources are low, so the

speed and accuracy of reactions and judgements may be impaired.

The main limitations of the brain fall into four categories:

- **Reaction Time** - The time between an event (i.e. a vehicle pulling out in front of the police vehicle) and the police driver making a physical response to it (i.e. braking, swerving) consists of the decision time (the time between observing the event and deciding what to do) plus the response time (the time to carry out the physical response). The more complicated the event, the longer the decision time. For example, if a vehicle pulled out suddenly on a busy road with lots of vehicles, pedestrians and parked cars, it may take longer to decide on the appropriate course of action if compared with the same event occurring on an empty road - other events act as distractions and drain attention away from the primary cue that indicates a hazardous situation unfolding.
- **Errors of perception** - In the high demand environment of blue light driving, police drivers may make observations but not process the information accurately or appropriately.
- **Expectancy** - When a police driver is on familiar roads, they may expect the road conditions to remain the



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same. In these circumstances, they may see what they expect to see, especially under 'red mist' conditions when their focus is on the nature of the call, rather than the current road and traffic situation.

- **Memory storage capacity** - The brain can't always deal with all the information it is given. Memory is divided into three areas - working memory, short-term memory and long term memory. Working memory filters information entering the brain, sending it to short term memory or discarding it. Short-term memory holds limited amounts of information (approximately 7 pieces) for a short time, after which the data is either transferred into long-term memory or forgotten. Blue light driving is heavily dependent on working memory and short-term memory, as information is only held for seconds at a time, from which decisions are made about what manoeuvre to execute next.

#### **Hazard Detection and Anticipation**

Police drivers who constantly scan their surroundings build up an accurate picture of what is happening around them. Appropriate scanning involves focusing vision on the far distance, the mid distance and the immediate vicinity of their vehicle in turn, and ensuring that the areas to the sides and the rear of the vehicle are scanned regularly. If this is carried out repeatedly, all potential hazards should be observed and the driver can focus their attention more specifically on the priority hazards, adjusting their speed and position accordingly. Anticipation is the ability to read the road and predict how a

hazard might unfold or, indeed, what other road users might do. Good observation is a key component of anticipation, and careful observation allows a police driver to look out for potential hazards, which provides valuable extra time to think, anticipate and react. To anticipate means extracting the fullest meaning from observations.

Young, inexperienced drivers typically have very fast reactions to simple stimuli, but slow reactions to traffic-related hazards because they have not developed enough experience about what can lead to a crash. This is an important principle that's also applicable to blue light driving. In other words, inexperienced police drivers are not fully aware of the risks of blue light driving and fail to anticipate them.

#### **Conclusions**

It is clear that officers have a difficult role to play in minimising the risk to the public whilst also seeking to control crime. When executing their duty, police drivers are susceptible to high levels of stress due to the very nature of the driving they do. Evidence suggests that officers need to be highly trained in decision-making skills during response and pursuit driving. However, with current pressures and resource limitations at police driving schools, the opportunity to develop decision-making skills can be fragmented and variable. Often, these skills are developed through experience on the job rather than training. In the present climate of corporate liability, this might leave the police service rather exposed.

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