Retrospective Audit of Patient Report Forms (PRFs) from semi rural specialist police firearms units January to December 2017.

Background

'D13' is a national medical training package designed to equip specialist firearms police officers with the knowledge and skills to provide immediately necessary medical care to patients before more advanced medical help arrives. By teaching a broad framework of C, ABCDE and emphasising that 'simple things done well saves lives' the training becomes applicable to multiple medical scenarios.

Patient report forms (PRFs) should be completed by officers post incident to reflect their medical input at scene. These contain data in a tick-box system of demographics, incidents type, mechanisms of injury (MOI), patient observations and treatments given following the widely accepted ATMIST format. There is also room for free text allowing more detailed descriptions and clarification of involvement. They are given a URN on the force's IT system and anonymised for external review.

Objective

The objectives of this audit were
- To identify the type of incident and mechanisms of injury attended by the armed police of rural units in order to ensure the current syllabus reflects the skills required by a rural force and to guide the emphasis on local refresher courses.
- To judge the quality of the form fill in order to consider adjustments to the PRF template

Method

Seventy-four PRFs from sixty-nine incidents attended by police officers from specialist armed police units covering semi rural areas over a period of twelve months (Jan-Dec 2017) were analysed. Two of these were on active firearms deployment. If multiple PRFs were submitted for the same incident these were treated collectively to gauge management and independently for the quality of form fill. The quality of the PRF on its completion and standard of medical care delivered was assessed by a healthcare professional.

Results

Quality of form fill:

Sixty-six forms were classed as 'good' or better, seven as 'ok' and only one required that more information be given. Where data was collected multiple times within the PRF to reflect progression throughout management (eg. respiratory rate, pulse and conscious levels) boxes were frequently either left blank after the first set or remained the same throughout. We felt this likely reflected repeated insertion of one data set rather than true values. It was also difficult to ascertain given the current PRF structure whether the absence of a tick reflected that an action had been considered and omitted with clinical rationale or not considered at all.

Incident Types (graph 1):
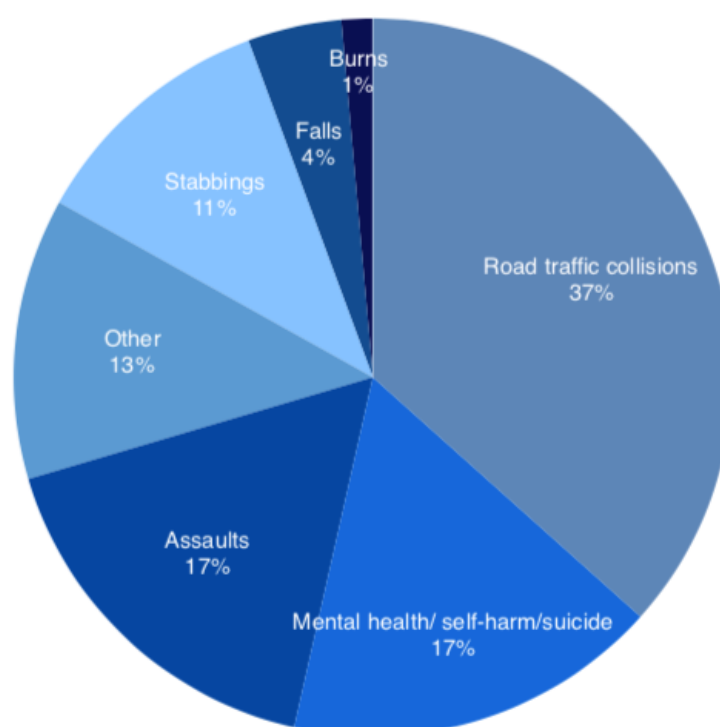
The most frequent types of incidents documented in the PRFs (figure 1) were Road traffic collisions (RTCs) (n=26, 37%), followed by mental health/self-harm/suicide (n=12, 17%) assaults (n=12, 17%), stabbing (n=8, 12%), other (n=9, 13%), falls (n=3, 4%) and there was one burn. Events labelled as 'other' included non-traumatic medical presentations such as difficulty in breathing, seizure or collapse. Alcohol and/or recreational drugs were recorded as being involved in eight incidents (12%), half of which were as part of self harm or suicide attempts (n=4).

Demographics:

Just over 75% of casualties were male (n=52), with only seventeen incidents involving females (25%). Of the RTCs 69% of patients were male (n=18), of the assaults 92% were male (n=11) and in mental health/suicide 75% were male (n=9)

Time on scene:

The amount of time officers spent on scene ranged from 5 minutes to 5 hours and 56 minutes with an average time of 1 hour 21minutes. There is no set space on the PRF to document at what point during this time medical assistance arrives although some PRFs state this in the free text nor how much of this on scene time was purely medical.

Injuries sustained:

Pain was the most commonly reported symptom, recorded in 58% of incidents (n=40), though the true number is likely to be higher as there were PRFs describing mechanisms of injury likely to cause pain not specifically marked as having pain. Injuries reported included lacerations (n=26, 38%), abrasions (n=26, 38%), bruising (n=26, 38%),

stab wounds & punctures (n=11, 12%) and fractures (n=11, 12%). Cardiac arrests and the need for cardiopulmonary resuscitation (CPR) were noted in nine PRFs (13%). Five (7%) of these also documented using an automatic external defibrillator (AED). Deaths on scene were reported in four PRFs (5%). Mechanisms involved in on-scene deaths included RTC, suicide, found dead at scene and collapse at rural property.

Interventions made:

External bleeding was documented in 31 PRFs (45%). Different treatment options used to manage these included: pressure only (n=8), pressure and dressing (n=17), dressing and no pressure (n=3).

Emergency field dressings were the most commonly used intervention to manage bleeding (n=19). Other interventions included haemostatic dressings (n=2), pelvic binders (n=3) and CAT tourniquets (n=2). It was identified in one incident that an emergency dressing had been used when a CAT tourniquet would have been more appropriate.

Difficulty in breathing was identified in nine PRFs. High flow oxygen was applied in 34 cases (49%). Airway adjuncts were used in three incidents (4%) ; one recorded a nasopharyngeal airway insertion, one an oropharyngeal airway and one both.

Discussion

From our data we can see that RTCs and assaults are the most common incidents encountered and would therefore recommend that simulations during courses and refreshers continue to be run using these scenarios. Mental health, suicide and self harm also reflected a large percentage of incidents seen; it would be appropriate that specific training for these types of incidents be given, though is not necessarily within the domain of the D13 training. As four of the incidents reported the death of a patient on scene incorporating this into training, as well as having a robust system of debrief, could support officers encountering this in the future.

Pain was the most frequently observed symptom and though there is scope to address this in training the police force will be limited in its provision of analgesia, both by medication licencing and tactical considerations. Though there is increasing uptake of Methoxyflurane (Penthrox) inhalation devices by tactical units in the UK this is likely to be determined by local forces clinical governance. If the Penthrox(™) inhalers are used it would be appropriate for this to be incorporated into the PRF ideally with a record of the pre and post use pain score.

In the majority of incidents casualty care was handed over to paramedics the time of which was sometimes detailed in the comments section but was inconsistent between forms. It may be beneficial for future PRFs to add a section to note what time paramedic assistance arrived. Knowing the length of time on scene before further assistance arrives could determine further scope of training and casualty management as well as help optimise service use.

The general quality of the form fill was good. An anomaly noted in some PRFs was that the section documenting the level of consciousness (using the AVPU scale) sometimes had multiple levels of consciousness filled out for each patient. We were unsure whether this was due to fluctuation of responsiveness during assessment, or the responder not being aware that only the one level needed recording per assessment. This could be clarified at future D13 courses. It is also clear that the 'yes/no' questions were filled out better than those requiring a specific number e.g. heart rate. The structure of the PRF also allows

ambiguity which makes analysis of the treatment difficult. For example, an un ticked box may represent that a) the action was clinically indicated but not done b) the action was not clinically indicated and thus not done. We therefore depend on the free text to illuminate this. Whilst this could be due to general difficulties with retrospective documentation it could also represent an area to improve in future PRF design and training in their correct use. Though the value of the PRF is primarily in its use in clinical governance, it also acts as a systematic tool to allow reflection and therefore alterations made to improve data collection may also be done in a way to structure learning.

There were several examples of very good understanding of medical care and safety in the audit, including one where a police officer had to intervene to stop the pre hospital removal of a tourniquet which had been in place for an hour by citing teaching specifically against this as the reason.

It should be remembered that a police officer's primary role is to be a police officer! The reality is that they are increasingly more regularly called upon to provide immediate medical assistance to significantly ill or injured people and they may be doing this for considerable periods of time on their own especially in more rural areas.

It is therefore gratifying that it is clear from this review that D13 trained officers were competent in applying the skills and knowledge gained in training to a wide range of scenarios ensuring good, early medical care for their patients.

The results of this and other audits have formed part of wider discussions with the College of Policing and others to help inform future information gathering.

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