Module 4
Medical Implications and Mental Health

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Aims:

Describe the potential medical implications of using operational safety techniques.

Learning Outcomes:

Officers/staff will be able to:

- Explain the dangers of positional asphyxia and describe the control measures to prevent same
- Explain the dangers of acute behavioural disorder and describe the control measures to prevent same
- Identify the dangers associated with neck restraints
- Identify the dangers associated with handcuff neuropathy and the control measures to prevent same
- Describe the medical implications of deploying irritant spray
- Describe the medical implications of using empty hand techniques
- Describe the medical implications of using baton/empty hand strikes
- Explain the mental health guidance

Section 1 - Introduction

The purpose of this module is to assist officers/staff to identify and rrumm1se the dangers associated with operational safety techniques, and attempt to eliminate unnecessary injury to both the subject and the officer/staff.

This module will hopefully broaden the officer/ staffs knowledge in relation to injuries and medical conditions, this may assist in choosing the most appropriate tactical option. It may also assist in explaining why other options were precluded and assist in providing appropriate aftercare.

Section 2- Medical Implications - General

Whenever an officer/staff uses any form of force, on any subject, under any circumstances, consideration must be given to minimising the potential injury to that Subject. In any case, all force used must be proportionate, legal, accountable, necessary and ethical.

All officers/staff, when performing their duties, have a common law duty of care. This means that an officer/staff involved in a use of force incident has a duty to minimise the injury potential to that subject. Once the subject has been arrested the officer/staff becomes responsible for the safety and wellbeing of that subject. Officers/staff must then provide for the needs of the subject , providing or obtaining medical attention if required. Officers/staff must also prevent further injury, including self harm from occuring.

Section 3- Positional Asphyxia

Positional Asphyxia also known as postural asphyxia, is a form of asphyxia that occurs when a subject's position prevents them from breathing adequately, and may result in respiratory failure, and death.

Positional asphyxia can occur rapidly when the subject is placed in a position that impedes the ability to inhale and exhale breath. It most commonly occurs in persons intoxicated with alcohol or dr ugs, or to those with reduced levels of conciousness. Being placed in the prone position for an undue period of time, or pressure applied to the back or chest, have been found to be major causes of positional asphyxia in the past.

Officers/staff should be aware of the increased danger, if a subject has been exposed to Irritant Spray, or Taser.

Risk Factors

Factors making an individual more susceptible to Positional Asphyxia:

- Age
- Obesity
- Alcohol and or drugs
- Exhaustion/fatigue
- Respiratory ilJness
- Disability (Including pre-existing conditions such as epilepsy and asthma)
- Physical position (in car/van footweJJs, slumped face down)
- Restraint

Signs and Symptoms

Signs and symptoms of Positional Asphyxia may include:

- Difficulty breathing, gurgling or rasping sounds
- Subject verbalises that they cannot breathe
- Panic
- SweHing in the face and neck, expansion of veins in the neck
- Behavioural changes - an active subject suddenly becomes passive, or a loud subject becomes quiet
- Cyanosis (Lips/nail beds/gums are discoloured). This is a late sign, and difficult to identify

Restraint

If a subject is placed in the prone position during restraint, breathing can become more difficult, due to the internal organs putting pressure onto the diaphragm. If the subjects arms are restrained to the rear, the pectoral muscles can be affected, this can also restrict the ability to breathe.

During the process of restraining a subject the officer/staff may be required to use body weight to restrain a subject. This additional pressure to the upper body, in addition to police restraint techniques may restrict the subjects ability to breathe, and subsequently cause the subject to struggle harder in an attempt to breathe. This struggling could be misinterpreted as an act of violence directed towards the officer/staff, who as a natural response might apply additional pressure to the subject in an attempt to restrain them further. Officers/staff should be aware of this cycle of events, and the possibility ofcausing Positional Asphyxia.

Officers/staff should remove a subject from the prone position, preferably onto their side as soon as is reasonably practicable following the restraint . An advantage is that the subject can breathe without further restriction than is absolutely necessary.

Any cases of positional asphyxia must be treated as a medical emergency.

Panic Attack

A panic attack is a sudden burst of extreme anxiety. Symptoms such as distress, hyperventilation and palpitations may be present. Recognition features can include extreme apprehension, muscular tension, sweating and trembling. Panic attacks although frightening are not dangerous. They usually last between 5 and 20 minutes, _.t>ut have been known to last up to an Hour. Someone suffering a panic attack should be removed from any obvious cause. They should be reassured that the symptoms not last long, and encouraged to breath cal jl d slowly, in through their nose and out thr h the mouth. Small sips of water can be give1'--8 to help calm them down. Officers/staff should remain with the subject until they 1fve fully recovered.

Transportation

The condition of the subject should be checked prior to departure, and regularly during transportation and after arrival at the destination. Subjects should not be transported whilst face down in the prone position or in any other position that may impede the ability to breathe.

Reception in the Custody Office

The arresting officer will inform the duty officer of full details and circumstances of the arrest. This will include all the use of force techniques and equipment used during the arrest, as well as the method of transportation for the subject.

The custody officer should:

- Note the condition of the subject
- Enquire regarding substance/alcoholabuse
- Observe any signsof intoxication
- Summon a Health Care Practitioner, or in case of an emergency, arrange transportation to hospital if the duty officer considers the subject is suffering positional asphyxia
- Document everything ofnote

In the past there have been tragic incidents, where the onset of positional asphyxia has led to deaths in police custody. Early recognition of risk factors, signs and symptoms, coupled with operational safety techniques should help to significantly reduce the chances of this occurring.

Section 4

Acute Behavioural Disturbance (ABD)

Just as abnormal brain function can be associated with a stupor or loss of consciousness, it can also cause confusion or aggitation. A severe brain agitation is sometimes known as "Exited Delerium" or "agitated delirium" or more commonly to the Police as Acute Behavioural Disturbance.

ABD is described by the Royal College of Emergency Medicine as the "sudden onset of aggressive and violent behaviour." It has been described as when a subject exhibits violent behaviour in a bizarre and manic way, rather than being simply violent.

ABD is a rare form of severe mania, and sometimes considered part of the spectrum of manic-depressive psychosis and chronic schizophrenia. However many of the signs indicating ABD, are common to anyone behaving violently.

Subjects suffering from ABD can die suddenly, or shortly after a strenuous struggle - while at hospital or in custody. There may be little or no warning to indicate when a subject may suffer cardiac arrest.

Possible Causes

There are a number of possible causes for ABD, these include:

- Drug intoxication (including new psychoactive substances, 'legal highs')
- Alcohol intoxication
- Drug and/or alcohol withdrawal states
- Psychiatric illness
- Acute brain injury
- Acute illnesses resulting in brain inflammation, metabolic problems or limited supply of oxygen to the brain.
- Hypoglycaemia (low blood sugar)

Signs and Symptoms

Subjects suffering from ABD may present the following signs and symptoms:

- Constant/near constant activity.
- Unexpected physical strength.
- Significantly diminished sense of pain.
- Non-responsive to the presence of authority figures/unable to follow commands.
- Rapid breathing or panting.
- Do not fatigue.
- Apparent ineffectiveness of irritant spray.
- Violent, bizarre or aggressive behaviour, shouting or panicking.
- Sweating, fever, hot to the touch or removing clothes.
- Impaired thinking, disorientation or feelings of paranoia.
- Attracted to/attempt to destroy glass and reflective objects.
- They may be hallucinating, hiding objects, running around.
- Sudden tranquillity after a period of frenzied activity, or vice versa.

Management of Persons with ABD

It is recognised that controlling a subject suffering from ABD will always be very difficult. Officers/staff may have to place them face down on the ground in order to handcuff them safely. Officers/ staff must remember the risks of positional asphyxia affecting a subject who has a brain agitation are far greater than that of a normal violent subject.

Subjects may be very difficult to control, and can continue to struggle beyond the point of exhaustion, making them very difficult to stop, whether or not handcuffs are applied. Once handcuffed, officers/staff should try not to restrain a subject face down. Subjects should be placed onto their side, or into a sitting, kneeling or standing position as soon as it is safe to do so. They may continue to kick out, and the officer/staff may have to consider application of the fastraps.

Such bizarre, exhaustive and persistent violent resistance is a classic indication of ABD. The subject must be monitored carefully as they could collapse or suffer cardiac arrest at any time.
Officers/staff must treat subjects suffering from ABD as a medical emergency.

Subjects affected by ABD, must be treated at hospital, as a matter of urgency, even if they suddenly calm down before they get there. If officers/staff suspect they may be dealing with an ABD subject, then the subject must be checked out at hospital, as soon as possible. Officers will not be criticised for taking action. Subjects suffering from ABD can collapse very suddenly and attempts to resuscitate are often unsuccessful.

The likelihood of officers/staff encountering an individual suffering from ABD is rare, but very real and the number of incidents are increasing.

Operational Guidance

All subjects who struggle, whether handcuffed or not risk exhaustion. This increases the chances of sudden death from cardiac arrest, positional asphyxia or other medical issues. It can occur anywhere, from the locus to the cells. Officers/staff need to be aware of this, and ready to deal with any medical issues as an emergency, should the need arise. If required subjects may need to be taken to the Hospital rather than to police custody.

Officers/staff must consider the following actions:

- Recognise that the situation is a medical emergency. If possible, alert the hospital staff before arrival, to allow appropriate preparation.
- Attempts at verbal de-escalation are often unsuccessful
- If safe to do so, subjects should be permitted comparative freedom of movement within a given area, in what would be regarded as a 'contained' situation
- Consideration must, if possible, be given to alternative options to restraining a subject, who is suspected to be suffering from acute behavioural disorder, whilst still affording an appropriate measure of protection for the subject, officers/staff and the public

Restraining a Subject with Acute Behavioural Disturbance

The aim of any physical restraint is to minimise the ability of the subject to move and injure themselves or others, and at the same time to ensure that the subject has a clear airway and circulation is not obstructed.

Officers/staff may be required to restrain subjects at scene, either to protect the subject themselves from further injury, and await medical assistance, or to protect the officer/staff and the public from being injured. In either case the following guidance should be followed:

- Subjects who appear to have this condition should be restrained only in an emergency. Restraint should be the minimum necessary, and for the shortest practical duration to facilitate transfer to definitive care.
- Sufficient officers/staff should be present to ensure safe restraint.
- The lead officer/staff, should explain to the subject what is happening, in a calm fashion.
- Immediately after the subject comes under physical control, they should be placed onto their side or into a sitting, kneeling or standing position. Prolonged restraint in the prone position must be avoided.
- Officers/staff should observe the subject's condition continually whilst being restrained, as death can occur suddenly and develop beyond the point of viable resuscitation within seconds rather than minutes.
- Whenever possible during restraint, a 'safety officer' should be identified, their responsibility will be to monitor the health and welfare of the subject during restraint.

In the event that a subject with suspected ABD loses consciousness. Officers/staff must take the following immediate emergency actions:

- Call for immediate emergency medical assistance and transfer to hospital
- Transferring to hospital should, where possible, be carried out by ambulance. If this is not possible then the subject should be transported by police vehicle.
- Where possible, avoid placing the subject in the cell area of a vehicle.
- Remove all methods of restraint if safe to do so.
- Prior to arrival at hospital, contact should be made with the receiving A&E unit and full details of the subject's condition communicated.
- Place the subject in a position that does not impede their breathing.
- Continually monitor the airway and breathing.

  Commence CPR if required.
- Notify a supervisory officer if one is not present. Supervisory officers notified of such incidents must attend the scene immediately.
- A full record of the officer/staffs perception of the subjects condition, and their actions up to, during and after the incident must be made in either the officer's notebook, or in the custody record, as appropriate.

Section 5
Neck Restraints

Neck restraints are not included within the National OST programme.

The use of such methods to restrain subjects, attacking or violently resisting officers/staff is discouraged. There are significant dangers in the use of any neck restraint, coupled with the high risk of grave injury, or fatality to the subject.

However, as with any use of force, the question to be considered is: "Is it reasonable in the **circumstances?"**

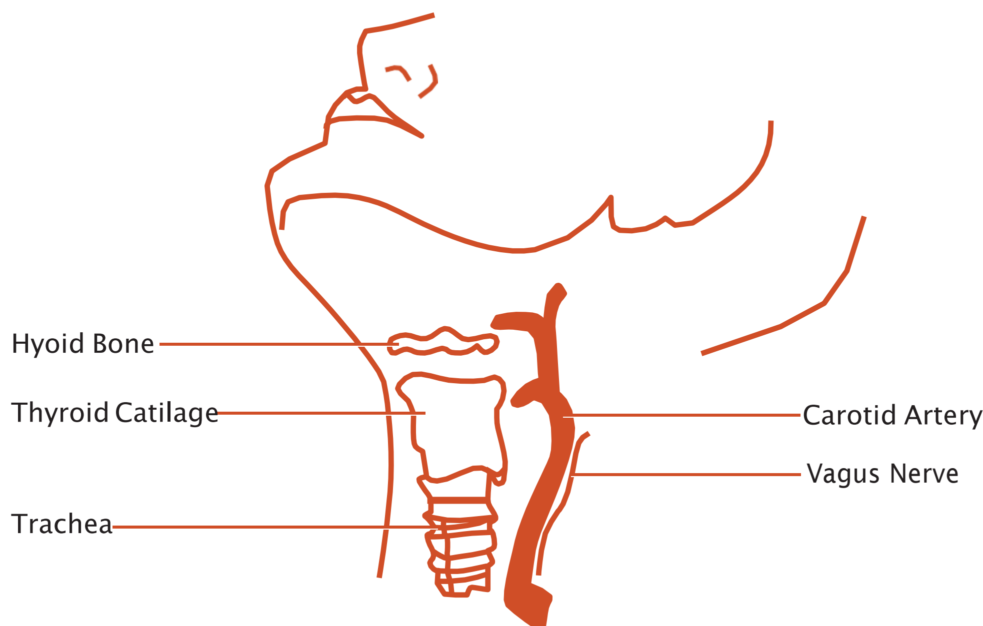
Neck Restraints

Heightened Awareness

By understanding more about the potential dangers of such restraints, coupled with the anatomical reasons why such serious injury or death can occur, operational safety trainers must adequately emphasise the warning to officers/staff of the need to avoid any form of pressure being applied to the neck area of a violent subject, during any confrontationalsituation.

Operational Safety Instructors should make all officers/staff fully aware of the dangers and injl.lliY potential, which are based on medical research and advice.

Anatomy of the neck



Implications of Neck Restraints

In understanding the anatomy of the neck it is important that OST instructors can accurately and adequately explain to officers/staff why the application of any neck restraint can result in either serious injury or death to the subject being restrained. In general terms when a subject is held in a neck restraint, pressure is brought to bear on either the front of the neck or the sides of the neck.

Pressure to the front of the neck can restrict the subject's ability to breathe. This can lead to damage to either the trachea, hyoid bone or thyroid cartilage, all of which can result in a blockage of the airway, and death can follow quickly. The application of pressure to the front of the neck can also be extremely painful, this generally causes the subject to struggle harder, rather than become passive and controlled. The greater the struggle, the greater the risk of causing further damage to the area.

Pressure brought to bear on the sides of the neck restricts blood flow to and from the brain and can bring about unconsciousness. Blood flow is affected by not only the pressure on the carotid arteries, but more significantly, by stimulation of the carotid sinus and the vagus nerve, the result of which is to slow down the subject's heart rate. This marked slowing of the heart rate can lead to cardiac arrest, especially when both sides of the neck are compressed/ struck simultaneously.

An officer/staff involved in a violent struggle, may find it impossible to avoid applying pressure on the subject's neck, thus running the risks previously described. Officers/staff should be made aware of the dangers inherent to neck holds, and although officers/staff are entitled to take any reasonable steps when life is at risk, neck holds of any sort should be avoided, whenever possible.

Instruments of any sort should not be used to apply pressure to a subject's neck unless, as with all neck restraints, the life of the officer/staff or another is at risk.

Section 6
Handcuff Neuropathy

This is a term used to describe injury caused by the application of handcuffs, whether of the rigid or chain link types.

There are a number of reasons why these injuries may occur, including incorrect application, failure to ensure appropriate tightness, failure to double lock, and incorrect positioning. Injury may also be a result of the subjects own actions, struggling, resisting application of the handcuff, or trying to pull their hands out of the handcuff once applied. In some cases these injuries have occurred when the handcuffs are applied correctly.

Types of injury may include:

- Damage to the main nerves in the wrist area, namely the radial, ulnar and median nerves, caused by compression by the handcuffs.
- Bruising and/or cuts to the hands, wrists or lower arms.
- Sprains and/or strains to the muscles, ligaments and/or tendons.
- Broken bones.

Nerve damage can be short term, long term or permanent and can manifest itself as loss of strength or weakened grip, numbness, loss of movement, diminished sensation, a tingling sensation in the fingers or pain in the wrists, handsor fingers.

Broken bone injuries are very rare from handcuffs, except for the Radial and Ulnar Styloid process. These are small bone projections at the ends of the Radial and Ulna bones.

Section 7
Irritant Spray

Effects of Contamination

Application of irritant spray to the face may affect the eyes, the respiratory system and the skin. The effect may be immediate or delayed, or there may be no effect at all. Irritant spray works by directly binding to the receptors that normally produce the sensations of pain and heat.

Eyes

Contact with the eyes may cause severe irritation and pain. The eyes may water excessively and can close tightly.

Subjects with glasses or contact lenses can be equally affected. Following exposure, contact lenses should be removed by the **Subject or Medical Professional** for faster recovery.

Respiratory System

Contact with the nose and mouth can cause a burning sensation, the mucous membranes may become inflamed and the nose may run excessively, increased salivation, coughing and shortness of breath have also been known.

A subject displaying aggressive behaviour, breathes faster and deeper than usual, which may increase the effects of irritant spray.

Skin

Exposure can cause a burning sensation as if being exposed to a scalding heat, which in turn causes severe discomfort or irritation to the skin. Depending on the subject's complexion, skin colour may range from slight discoloration to a bright red.

Solvents on the skin may cause blistering. This again varies on the subject's skin type.

Tolerance

It is extremely unlikely that anyone can build up a tolerance to irritant sprays, even after repeated exposure, but a subject may become less sensitive to irritant sprays, depending on the factors outlined previously.

Aftercare

There is no evidence of lasting side effects or after effects.

When irritant spray has been used, and a subject restrained, priority must be given to their aftercare. This is of the utmost importance, not only for those whom the use of spray was intended, but also for those affected by cross contamination, including officers/staff.

When an officer/staff has used irritant spray, and the subject is safely restrained, these procedures should be followed:

- Give reassurance that the effects of the spray are temporary.
- Instruct the subject to breathe normally. This will aid recovery and prevent hyperventilation.
- Remove the subject to an uncontaminated area where they can be exposed to cool, fresh air. This will permit the particles to be blown off the body.
- Exposure to cool, fresh air will normally result in recovery from significant symptoms within 15 minutes Advise the subject not to rub their eyes or face, as this may aggravate their condition.
- Discourage the subject from applying water to the eyes. It may provide some relief but may delay the long-term recovery.
- If reactions persist beyond 15 minutes, the use of copious amounts of cool tap water may be used to flush remaining irritant spray from the face.

Irrigation of the eyes should only be undertaken by an FME/police surgeon or other specified trained medical personnel. Attempting to irrigate the eyes at an earlier stage (when they are being forced closed by the effect of the spray) would be futile. Under no circumstances should warm water be used.

There are no recognised antidotes or neutralising agents for irritant spray. Use of these have been examined and are not recommended. In some cases the use of these have caused more harm than good.

If any adverse reactions are observed, immediate medical assistance should be obtained. It is essential that the subject's breathing be monitored. If the subject is having difficulty resuming normal breathing the provision of medical assistance must be given precedence over conveying the subject to a police station. In such cases the subject must be taken directly to a hospital.

Officers/staff should always pay particular attention to subjects on whom the spray appears ineffective, and to those exhibiting bizarre/violent behaviour, or experiencing breathing difficulties.

Subjects exposed to irritant spray will be regarded as special risk prisoners, and must be monitored whilst in police custody, in accordance with instructions, i.e. 15-minute checks. These checks must be recorded on the prisoners custody record. All prisoners who have been exposed to irritant spray must be assessed by the on call Police Surgeon, Forensic Medical Examiner (FME) or Health Care Professional (HCP). It is at the discretion of that medical professional, as to whether the prisoner requires any further examination. It is the duty of the custody officer to inform the relevant police surgeon, FME or HCP of any prisoner who has been subjected to irritant spray.

Skin blisters and burns may take up to 72 hours to become evident, it is advised those exposed should contact a health professional for further management.

Section 8
Empty Hand Techniques

Holds and restraints have the potential to cause strains/sprains and hyper-extension type injuries. As well as damage to, or tearing of muscle fibres and even damage to tendons, ligaments and bone.

Physical strikes have a higher potential to cause soft tissue tnJury, as well as the previously mentioned lllJUries, due to the direct application of blunt trauma.

When applying empty hand techniques, the officer/staff must make a tactical decision to use such force, while giving due consideration for the need to gain control, against the potential for injury to the subject.

Section 9

Baton And Empty Hand Strikes

Whenever an officer/staff use a baton or empty hand strike, consideration must be given to minimising the potential injury to that subject.

To this effect, the trauma chart can be used as an aid to emphasise the medical implications of striking different areas of the body.

The trauma chart will help officers/staff to assess the probability of m1uring a subject when selecting a target to strike, by splitting the body into colour coded zones.

In relation to strikes, medical evaluation on various parts of the human body has classified the body by target areas or colours, denoting the level of risk incurred by the application of physical force.

The classification of target areas was developed to assist officers/staff to respond appropriately to the threat presented. The officers/staff target selection must depend on a comparison between the degree of imminent danger faced, and the potential injury to the subject.

Primary target areas are coloured **GREEN.** These are generally the large muscle groups and limbs. Impact on these areas is likely to cause pain or slight injury, but unlikely to cause serious, long lasting injury or death.

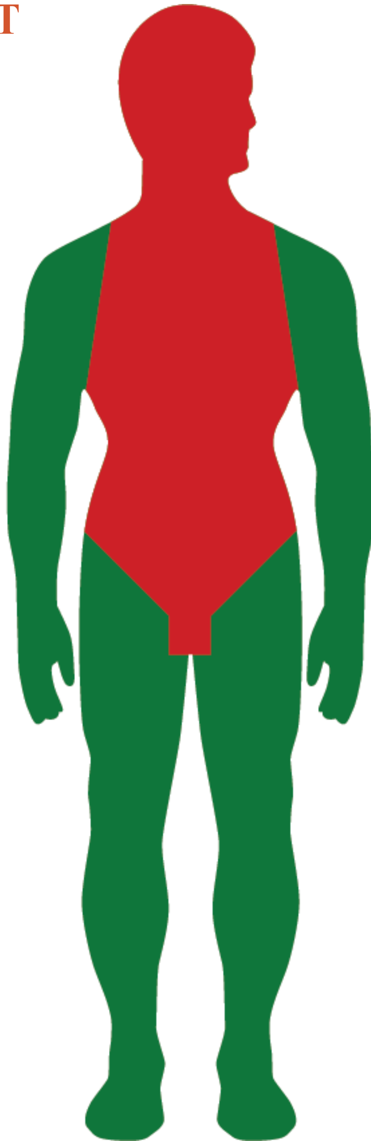
Secondary target areas are coloured RED. These are the areas where vital organs are located. Impact to these areas, carry a higher risk of causing serious, long lasting injury or even death.

Potential for injury is determined by the degree of force impacting on a specific location on the body. Some locations are more susceptible to injury than others.

Officers/staff can use this chart in combination with the National Decision Model, and Tactical Options Model to aid in the justification of their actions. The chart may also be referenced to describe the subjects actions if the officer/staff are attacked. This can aid officers/staff to justify their response options.

It is important for officers/staff to remember this chart is a guide, and officers/staff may find themselves in a situation where they do not havea choice of target areas. Officers/staff may fmd the only target presented is a Red, Secondary Target. In these situations, officers/ staff should ensure they record all the details justifying their useof force.

FRONT



BACK

GREEN AREAS - PRIMARY TARGET AREAS

RED AREAS - SECONDARY TARGET AREAS

The Head

Blows to the head carry the highest risk of causing serious, long lasting injury or possibly death. For this reason, the head is a RED AREA. It may be struck only when justified.

The Neck

Connecting the head and body, the neck contains vital structures (front and back.) It is a **RED AREA.**

Chest

The chest contains various vital organs, depending on the level of force used, the chance of serious injury or death is increased. This is a RED AREA.

Back

The region over and around the kidneys is a RED AREA.

Shoulder Blades

The shoulder blades are a GREEN AREA, where a reduced risk of injury would be expected.

Upper Abdomen

The region bordering the solar plexus. This area contains various vital organs, depending on the level of force used, the chance of serious injury or death is increased. This is a **RED AREA.**

Lower Abdomen and Pelvis

This area contains various vital organs, depending on the level of force used, the chance of serious injury or death is increased. This is a **RED AREA**.

Groin

Injur y in both genders may cause unconsciousness, serious injury, shock or death. This is a **RED AREA**.

Tail Bone (Coccyx)

Impact to this area may result in an injury being transmitted to the spine. This is a RED AREA.

THE UPPER EXTREMITY

The shoulder, upper arm, elbow joint, forearm, wrist and back of the hand are **GREEN AREAS**.

THE LOWER EXTREMITY

The thigh, knee joint, shin, ankle, Achilles tendon and foot are **GREEN AREAS**.

Section 10: Pregnant Subjects Safer Restraint

It is understood that there may be a requirement to restrain or use force on a pregnant subject. This force must be proportionate, legal, accountable, necessary and ethical. Due to the high injury potential, the following guidance should be followed to reduce risk of injury to mother or baby

- Verbal de-escalation and subject relocation is preferred to physical response.
- Holds may be used, however emphasis should still be on verbal de-escalation. Holds such as the escort/come along hold are preferred as they place less strain on the abdominal area.
- Physical intervention should only be used as a last resort and only for the shortest and safest time possible until less restrictive procedures can be established.
- Whenever possible restraint should be initiated bya minimum of two officers/staff, if possible a third officer/staff can control the subject's head.
- Subject to be placed in a seated position as soon as possible.
- Holds to be transferred to less restrictive holds as soon as possible.
- Officers/staff to move away from the subject as soon as they feel it is safe.
- During restraint, subjects should be monitored for signs of deterioration and placed onto their LEFf side, should treatment be required. The subject should never be left flat on their back, or on their right side, as these possitions can cause medical complications.
- Subjects should not be pulled up to a standing position, from a seated or half seated position.
- Post incident, the subject should be referred for maternity assessment as soon as possible.

Section 11: Amygdala Hijack

Amygdala Hijack is an emotional response to stress, often thought of as losing control of ones emotions. An example of this is where an officer or staff member is talking to a member of the public and they do not appear to be listening to them, ignore what they say, or maybe talk over the top of them.

This kind of interaction could make an officer or staff member snap. They may suddenly have an outburst such as shouting at them for not listening. Afterwards an officer or staff member may realize have overreacted and that the way they acted was unnecessary and may say to themselves "what was I thinking"

An officer or staff member may not have been thinking at all as to what actually happened this is where there Amygdala hijacked them.

Amygdala hijack refers to the situations where the amygdala overrides control of a person's ability to respond rationally to a perceived threat - the logical brain gets impaired due to emotional The amygdala is an almond-shapedstructure situated in the mid-brain, forming part of the limbic system. This structure is known as the emotional hub of the human brain and plays a role in fear and the fight-or-flight response.

The amygdala is primarily involved in the processing of emotions and memories associated with fear. The amygdala is considered to be a part of the limbic system within the brain and is key to how Humans process strong emotions like fear or pleasure.

Human ancestors developed this response to deal with threats and dangerous situations, to releasestress hormones that prepare the body to either face the threat or flee from it.

The cerebral cortex evolved long after the limbic system and provides us with logical reasoning. Whilst the amygdala may work automatically,the frontal lobes of the cortex allow people to process and think about their emotions so they can make logical decisions to avoid unfavorable disputes.

Today, common human threats tend to be different to the ones experienced by human ancestors such as work and life stressors or being anxious about social situations.

The amygdala, however, cannot differentiate between physical and emotional threats so in the situation of experiencing sudden stress at work, this could trigger the amygdala to automatically respond before the frontal lobes have had a chance to provide any logical reasoning to the situation.

Amygdala hijack can be useful in some situations that are life-threatening, such as causing officers or staff members to move out of the way of a car traveling towards them before they have even registered that the car was there. However, in other situations, amygdala hijack can cause them to react in an intense, emotional way which may be out of proportion to the situation. For instance, experiencing a member of the public who keeps trying to talk to an officer or staff member whilst they are trying to concentrate on work could trigger the amygdala to take over and result in them shouting at that person. Without the ability of the frontal lobes, an officer or staff member would be unable to think clearlyso they may not be in control of their responses.

Causes

In the normal context, when sensing something in the environment, the sensory information gets sent to the thalamus, a primitive part of the brain which acts as the brain's relay station.

The thalamus relays the sensory information to the frontal lobes of the cortex, a center for higher brain functions such as perception, decision-making, and language.

The cortex then processes the sensory signals from the thalamus and applies logical reasoning. For the involvement of the emotions, this processes signal is sent to the amygdala.

The amygdala will then produce appropriate emotional responses followed by a flood of hormones and enzymes released to create suitable emotions and actions. When a threat is sensed, the amygdala may automatically activate the fight-or-flight response.

However, the frontal lobes process the information to determine if the threat is real and what a logical response would be. If the threat is determined to be not serious, the frontal lobes tend to take control, and this results in people responding in a thought-out way.

This process is different dur ing an amygdala hijack. During a hijack, the sensations from the environment still reach the thalamus. However, the thalamus understands that in some threatening conditions, involving logical reasoning would be a waste oftime.

Thus, the thalamus bypasses the cortex and projects straight to the amygdala, expecting an instant action to prevent the threat. In the amygdala, a flood of hormones and enzymes are released, creating emotions and actions that may be considered out of proportion to the situation.

The amygdala initiates the fight-or-flight response before the cortex has had a chance to overrule it. This cascade of events triggers the release of stress hormones, including epinephrine and cortisol.

For mild or moderate threats, the frontal lobes can often override the amygdala, but for those considered strong threats, amygdala hijack occurs. The immediate result of the amygdala hijack is that there is a depreciation in working memory.

The hijack causes people to narrow their ability to see more than one solution to a threat. Within a few seconds, when the hijack pathway is completed, this is when people may start questioning themselves, such as 'What was I thinking?'.

With no contribution from the frontal lobes, the thought processes ceased in the moment, so there was no rational thinking. This explains why people may express that they cannot 'think' when emotionally overwhelmed or distressed.

Hijacks are often mistakes as described by Goleman . They can be either sudden, emotional, negative emotion or doing something which leads to regret.

Psychological threats that can trigger amygdala hijack are pressures and stressors of modern life, work, and relationships. Anger, aggression, anxiety, and fear are also common emotional triggers.

Symptoms of amygdala hijack

The symptoms of amygdala hijack are because of the body's chemical response to stress. The hormone released by the adrenal glands, cortisol, and epinephrine, prepare the body to fight-or-flight and have an effect on the body:

- Rapid heart rate
- Clammy skin
- Dilated pupils to improve vision for faster responses
- Sweating
- Goosebumps on the skin
- Increased blood sugar - for immediate energy
- Contracted blood vessels allow the body to redirect blood to major muscle groups
- Airways expand to allow in and use more oxygen

The result of amygdala hijack can cause behaviors which are considered irrational for the situation such as shouting, verbal abuse, or crying.

An officer or staff member may also find they are unable to think clearly during a hijack. After the hijack, it is common for

an individual to feel embarrassed or regretful.

How to prevent amygdala hijack

In order to prevent amygdala hijacks, Individuals must increase their emotional intelligence.

5 basic competencies that are essential for increasing emotional intelligence: self-awareness, self-regulation, motivation, empathy, and social skills.

1. Self-awareness : Being self-aware is the ability to recognize a feeling as it is happening. In order to prevent the amygdala from overriding rational thought, an individual must identify an emotional response and manage its control over the situation. Self-awarenessgives them the skills to distinguish between accurate and inaccurate expressions of emotions.

2. Self-regulation: To be able to self-regulate means that emotions can be managed. It is the ability to connect or disconnect from an emotion depending on its usefulness to a situation . Individuals who can self-regulate can respond logically with cognitive thought, opposed to reacting emotionally without forethought. An emotionally intelligent individual can recognize when a hijack is coming and attempt to prevent an undesired reaction.

3. Motivation: An emotionally intelligent individual, according to Goleman, is someone who strives to satisfy thei r intrinsic motivation in work and other activities, regardless of external incentives.

4. Empathy: An empathetic individual can recognize emotions in others. Through this, they can be understanding, aware of, and sensitive to other's feelings and work to utilize this ability to manage their own emotions, promote good emotions, as well as coming to a positive result in a conflict.

5. Social skills: Those with strong social skills should be able to have good conflict resolution skills. Thus, in times where a conflict may arise, those with strong social skills can react and respond to others in a positive way.

Mindfulness

Mindfulness is another method that can be utilized to prevent amygdala hijack. Mindfulness is the ability to be fully present in the moment, aware of the self, where one is, and what one feels.

In a way, mindfulness employs similar techniques to the competencies of emotional intelligence proposed by Goleman. In this way, mindfulness could also improve upon a individuals emotional intelligence.

Mindfulness is usually a technique which needs practicing regularly for better effects, rather than just implementing the techniques when about to experience an amygdala hijack.

One way to help to focus during mindfulness practice is to actively control breathing, focusing on how the body responds to the breath.

Practicing mindfulness can help a individual to better control the body's responses when experiencing a reaction and helps individuals to feel more present in the moment and engaged in responses.

Stress management

Being able to manage stress in general may help prevent amygdala hijacks from occurring. It may be useful for some to make themselves aware of what their stressors or triggers are.

These could be small or large triggers. Making a note of when everyday stressor turn into chronic stress can help with identifying ways to manage this stress.

Effective stress management can include fast-acting relievers such as breathing exercises, which can bring immediate relief. As well as this, general healthy habits can be utilized to reduce overall stress such as

regular exercise, meditation, and using a journal.

How to cope with amygdala hijack

Whilst using preventative measures to ensure amygdala hijacks do not happen, there are times where these situations can stilloccur.

When someone may feel that an amygdaia hijack may be happening, there are some methods to help cope with the situation .

- **Name the emotio n:** Recognizing and naming the emotion when it happens can shift connections back to the frontal lobes since this requires the use of language and analysis.Even simply stating 'I am mad' could be enough to make this feeling less intense and bring back a rational mindset.
- **econd rule:** It can take the chemical involved in an amygdala response to dissipate. Therefore, delaying any kind of response for about 6 seconds could prevent the amygdala from taking control and causing an emotional reaction. Whilst delaying the response, this time could be used for taking the time to think about something positive or to focus on breathing.
- **Breathin g:** Breathing can be a powerful tool during a heightened situa tion as it can trigger the parasympathetic nervous system to bring about a restful bodily response. Taking control of breathing in stressful situations can allow thoughtful decisions which are not driven be emotions.
- **Change the setting:** By getting up and moving around in stressful situa tions, the surroundings are automatically being considered which reactivate the thinking part of the brain. Also, taking some time out away from the stressful situation in times of feeling out of control can help individuals to get a better hold of their emotions and see things from a rational perspective.
- **Share the mental lode:** When feeling a lot of emotions, sharing feelings with a trusted person can split the mental lode and help an individual's amygdala feel less threatened. Likewise, the use of language in highly emotional situations encourages the use of the thinking part of the brain.
- **Draw on mindfulness:** Whilst it may be important to practice mindfulness, drawing on the techniques used in practice can help an individual move away from negative internal feelings and back to the present through paying attention to the surroundings.

It is important to remember that amygdala hijack may not be preventable in every situation and that it is realistic to expect setbacks. When these happen, it may be useful to take some time to acknowledge the actions of what happened and reflect on this.

This can help shift towards a mindful way of viewing the experience and to may provide some useful insight into how to avoid this situation again next time.

Refe rence

Guy-Eva ns, 0. (2021, Nov 05). Amygdala Hijack and the Fight or Flight Response Simply Psychology. www.simpl ypsychology.org/what-happens-during-an-amygdala-hijack.html

Section 12- Mental Health Guidance

One in four people experience a mental health problem in any given year, and many come into contact with the police, either as victims of crime, witnesses, offenders or when detained.

The behaviour of someone in mental health crisis, can be misunderstood and can lead to someone being treated in an incorrect manner. For example, behaviour can be misinterpreted as dangerous and met with excessive force. Lack of understanding by officers/staff can add to the distress a person may be experiencing, and this may present itself as unnecessary aggression or suspicion.

Officers/staff should develop a response that views subjects with mental ill health in terms of potential vulnerability and needs, rather than risk and danger as a default.

Officers/staff have a crucial role in working with and supporting people with mental health problems. Officers/staff may be the first to respond to situations involving people in mental health distress, having to make quick decisions, assessing the situation as well as the needs of the individuals involved, ensuring their safety and that of the general public.

It has been recognised that this guidance, or any training received does not empower officers/staff with clinical knowledge or skills, but rather provides a level of understanding and awareness appropriate to their role to respond confidently in situations involving mental ill health or suicide intervention. The focus must be to allow officers/staff to make a judgement or assessment of an individual's vulnerability, rather than identifying a specific mental health illness, condition or learning disability.

A breakdown of the most common mental health conditions and basic communication guidance can be found in the Diversity booklet under Mental Health. Further information, access to e-learning and links to support organisations can also be found on the Mental Health page of the Police Scotland intranet.

Although officers/staff are not expected to be able to diagnose the specific nature of mental ill health or learning disabilities, it is important that they are able to recognise the warning signs. This recognition can occur at any stage, whether taking an initial call, attending an incident, or in custody etc.

Indicators of General Concern:

- Irrational conversation or behaviour.
- Talking about seeing things or hearing voices which cannot be seen or heard.
- Removing clothing for no apparent reason.
- Confusion or disorientation.
- Paranoid beliefs or delusion.
- Self-Neglect.
- Hopelessness.
- Impulsiveness.
- Inappropriate or bizarre behaviour.
- Obsessive thoughts or compulsive behaviour.
- Inappropriate responses to questioning.
- Apparent suggestibility.
- Poor understanding of simple questions.
- Confused response to questions.
- Speech difficulties, e.g. slurring words or difficulty with pronunciation.
- Difficulty reading or writing.
- Unclear concepts of times and places.
- Problems remembering personal details or events.
- Any suggestion that a subject is in touch with mental health services, e.g. psychiatric medication or appointment card.

Indicators of General Concern Continued:

- Poor ability to cope with interruptions.
- Inability to take down correct information or follow instructions correctly.
- Talking continuously, or too slowly and ponderously.
- Repeating him or herself.

Indicators of Concern for the Safety of an Individual or Others

Behaviour which should raise concern about a subject's risk of harm to themselves or to others includes:

- Putting themselves in danger, e.g., walking into the path of moving traffic or on railway lines.
- Asking for help with their mental health.
- Engaging in threatening behaviour towards others for no obvious reason.
- Threatening or engaging in self-harm.
- Attempting or threatening suicide,
- g., expressing ideas, intentions or plans relating to suicide.
- A high level of volatility.
- Being unresponsive to others.
- A tendency to trip, fall over or bump into things.
- Hyperventilating (over-breathing.)
- Showing physical signs of severe malnourishment and self-neglect

Some effective guidance has been produced by the mental health organisation MIND, in a booklet entitled Police and Mental Health.

Effective Communication with people with mental health problems

When a subject with mental health problems come into contact with the police, it is highly likely they have already been through a distressing experience, which can often exacerbate their symptoms. They may be wary about interacting with the police due to fear or previous negative experiences.

It is important for officers/staff to communicate effectively, to enable a subject with mental health problems to overcome their distress, and ensure the incident is dealt with appropriately.

These are the key factors to remember:

- Officers/staff should introduce themselves, they should explain their role and what the subject can expect from them.
- Acknowledge and respect how the subject is feeling.
- Listen sensitively and actively.
- Use responsive body language.
- Use a calm and reassuring tone.
- Ask short , simple and open questions.
- Reflect back on the information and summarise the main issues to show they have been listening.
- Be honest and transparent about what is going on.

How to help someone in distress.

There are a number of basic rules that could help officers/staff communicate more effectively with people with mental health problems:

- Ask whether the person usually receives support from anyone and if contact can be made with that person.
- Present advice as a series of options rather than a command.
- Avoid focusing on negative options or language.
- Acknowledge a person 's anger rather than trying to be defensive, even if the anger is directed towards the officer/staff, or their actions.
- Refer to other services that may help the person.

Tone and language.

How an officer/staff speaks to someone in distress, can often have an effect on how that person feels. Officers/staff should consider how the other person may interpret interacting with them.

Officers/staff should:

- Use a reassuring tone and display responsive body language - retain eye contact, nod and use utterances showing understanding.
- Listen sensitively - allow the person to talk freely and don't interrupt If they cry or break down, let them express their feelings before moving on.
- Officers/staff should take their time, the subject may be finding it difficult dealing with things at this time.
- Acknowledge how the subject is feeling, by using statements that are neutral and supportive.

Officers/staff should try to validate and assure the subject, by telling them many other people have similar experiences. Knowing they are not alone can be very reassuring to someone with mental health problems.

Officers/staff should avoid statements that could appear to belittle a subjects' feelings, e.g., "you will feel better tomorrow."

What should officers/staff do if the subject becomes angry or abusive?

- Officers/staff should acknowledge the subjects anger, without being defensive of themselves or others
- If someone becomes offensive or abusive, then politely but assertively interrupt them to state that the language or tone is unacceptable, and request they moderate their tone and language.
- Ensure the subject is given a chance to stop being abusive or offensive so that the conversation can continue.

What should Officers/staff do if the subject is experiencing hallucinations and delusions?

- Remember these events are real for the subject and can be very frightening and distressing for them.
- After passing information to the subject, officers/staff should allow plenty of time for the subject to process this information and respond.
- Never dismiss, m1mm1se or argue with the subject about their hallucinationsor delusions.

- Communicate understanding and accept that they have experienced these events, but do not pretend to have experienced them too.
- Where possible, show empathy and understanding with some of their feelings.
- Communicate in an uncomplicated and succinct manner, repeating things if necessary

Officer/staff response

Strategies include:

- Assess the situation , without presuming what is going on.
- Recognise Warning and Danger signs.
- Consider what other impact factors may trigger the person towards violence.
- Display appropriate body language.
- Officers/staff should react in line with their training, Listen, Ask, Explain, Paraphrase, and Summarise.
- Give the subject realistic options and choices, to let them feel in control, without compromising safety.
- Officers/staff should maintain a safe reaction gap. This keeps the officer/staff safer, and helps the subject to feel less threatened.
- Allow the subject to carry out any ritualistic or repetitive behaviour - this may help reduce anxiety.

Try to:

- Officers/staff should ensure they are not threatening towards the subject.
- Explain what you intend to do. It is not advantageous to keep the subject guessing, especially if they have feelings of paranoia.
- Be careful how you communicate if more than one officer/staff, then only one officer/staff should talk with the subject. This applies particularly to those who suffer from schizophrenia, as they may hear additional voices. The second officer/staff should provide cover for the contact officer, but should avoid standing directly behind the subject.
- Keep movements to a minimum.
- Keep hands in view. If you are not holding anything, let them know that.
- Remove them from a source of noise - it is a major distracter.
- Use short simple phrases.

The key to achieving control of the situation involving a person suffering from mental health problems is the ability to communicate in a clear and sensitive manner.

Body language

- Officers/staff should have an open approach to the subject, try not to approach from behind.
- As well as establishing a reaction gap, officers/ staff should adoptan appropriate stance.
- Do not surround the subject with officers/staff.
- Do not stand over them, finger point or make physical contact unless it is absolutely necessary.
- Use normal eye contact - avoid staring, but be alert to their movements and the distance between the officer/staff and the subject.
- If possible reduce your height, by sitting or squatting at the same level as the subject.
- Remove hats, these can be seen as a sign of authority

If an officer/staff believes the subject is experiencing mental health problems they should;

Try not to:

- Shout.
- Look aggressive.
- Whisper to colleagues.
- Use blue lights and sirens unnecessarily.
- Use the police radio, unless essential.

Do not touch the person unless:

- Officers/staff are sure they are not in danger.
- It is essential to perform an arrest or control technique.

Additional Communication Requirements.

Officers/staff can frequently engage with a subject who has additional communication needs. They will come into contact with officers/ staff not only as suspects or offenders, but also as victims, witnesses, or simply to seek assistance. The way an officer/staff responds to a person experiencing these issues will in turn influence the behaviour of that person and if inappropriate , may increase the distress that person is suffering.

When responding to any incident, it is necessary for officers/staff to respond in a positive, caring and professional manner. If possible the incident should be resolved with sound tactical communications, with other use of force tactics only being utilised if the communication process has broken down, or has been found to be ineffective.

It is important to establish an individual 's best method of communication. Some guidance is given below in relation to deaf and hearing impaired communities and for those with a learning disability. However, the following guidance is helpful for all members of the public.

Officers/staff are required to establish contact with a subject Making eye contact, or getting into the line of sight of the subject, can be the best way to establish if the subject is aware of the officer/staffs presence , or if the subject is actively trying to avoid contact, for whatever reason.

Once contact has been achieved answering the following 3 questions should allow officers/staff an opportunity to establish methods of communication.

Why? Officers/staff should explain the reasons why they are talking to the subject, or why the subject has been arrested/detained.

What? Officers/staff should explain what is going to happen to the subject, e.g., searched, handcuffed or arrested.

How? Officers/staff should explain how they will carry out the action, and what the subject is required to do.

Deaf, Hearing Impaired or Deaf Blind.

This part of the module aims to give practical advice to officers/staff dealing with a subject who identifies as above:

It is estimated that approximately 945,000 people in Scotland have a hearing impairment. It is expected that this number will continue to rise to 1 in every 5 people by 2035. If officers/staff are engaging with someone with a hearing impairment, the following guidance should assist:

- Attract the persons attention. With deaf people it is acceptable to wave, to attract their attention and by getting into their line of sight. If dealing with a blind person, it can also be acceptable to gently touch them gently on the arm or shoulder.
- Face the person directly, on the same level and in good light. This may mean crossing to a street lamp or moving rooms where possible.
- Try to ascertain the subject's preferred method of communication. This may include lip reading, written communication or a BSL interpreter. Please note; a BSL user's first language is BSL so some people may have difficulty reading and understanding written English.
- If the person has impaired hearing, or lip reads, speak clearly and natur ally, without shouting or exaggerating mouth movements. Shouting distorts the lip patterns and may make lip reading more difficult.
- At regular intervals make sure what is being said has been understood before carrying on.
- Ensure the Subject has an unobstructed view of the officers/staff face when talking.
- Do not eat, chew or smoke while talking. Speech can be more difficult to understand. Try to minimise any background noise.
- If the subject has difficulty understanding a particular phrase or word, try to fmd a different way of saying the same thing, rather than repeating the original words over and over. In particular, avoid using jargon.
- If using a BSL interpreter , remember to speak to the subject, not the interpreter.
- Be aware of all facial expressions and body language, and monitor the subject's body language for changes.

Learning Disabilities

In Scotland there are approximately 16,000 children and young people and 26,000 adults identified as having a learning disability, although it is believed that the number is actually far higher (Keys to Life Strategy , Scottish Government 2013).

The following guidance is advised, when officers/staff believe they may be engaging with a person who has learning disabilities or difficulties.

Officers/staff should:

- Get the subject's attention.
- Try to ascertain their favoured method of communication.
- If a subject is believed to have a learning disability, officers/staff should ask if there are any requirements the officers/staff should be aware of.
- Be patient and give the person time to explain.
- Speak slowly and clearly and regularly check for understanding.
- Keep instructions and questions short and clear. Repeat when necessary and use different words to help understanding.
- Avoid jargon.
- Reduce excessive background noise.
- Consider contacting an appropriate adult at an earlystage.
- The person may react in an extreme manner to being touched.
- They may also be very tactile and want to touch your uniform and equipment, provide clear instruction, do not shout or act aggressively.
- Officers/staff should consider the implications of handcuffmg a BSL user, and to only use handcuffs where absolutely necessary. If handcuffs are required, consideration will be given to applying the handcuffs to the front to allow some opportunity to communicate with BSL. The handcuffs should be removed as soon as reasonably practical, or when safe to do so.
- Treat adults as adults, maintaining respect throughout .