Bwrdd Iechyd Prifysgol Betsi Cadwaladr University Health Board

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Safe Removal of Ligature - Standard Operating Procedure (SOP)

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Author(s):	Rebekah Roshan Julie Smith Sarah Bellis Hollway	**Author(s) title:**	Head of Nursing MHLD East Associate Director - Quality Improvement Secondary Care BCUHB Resuscitation Services Manager BCUHB
Responsible Dept / Director:	Trevor Hubbard - Deputy Executive Director Of Nursing		
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Documents to be read alongside this policy:	Cardiopulmonary Resuscitation (CPR) Policy – RES03 Restraint Guidelines – MD02 H & S Risk Assessments Ward environmental risk assessments Procedure and Guidance Document for Manual Handling (WP55) BCUHB Decontamination of Medical Devices Procedure (IPC17) A Clinical Policy For 'Do Not Attempt Cardio Pulmonary Resuscitation' (DNACPR) for Adults In Wales

Purpose of Issue/Description of current changes:

To provide guidance to services and staff regarding the safe removal of a ligature. To include storage and safe handling of ligature cutting equipment.

First operational:	Date the policy was first operational				
Previously reviewed:	date	date	date	date	date
Changes made yes/no:	Yes/no	Yes/no	Yes/no	Yes/no	Yes/no

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1. INTRODUCTION

The most common method of suicide in the United Kingdom is hanging or strangulation (Office of National Statistics, 2017) https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/deaths/bulletins/suicidesintheunitedkingdom/2017registrations

A ligature is a piece of material that is used to cause compression of the neck that may lead to unconsciousness or death by causing an increasingly hypoxic state in the brain.

A ligature point is anything which could be used to attach a cord, rope or other material for the purpose of hanging or strangulation. Ligature points include, but are not limited to: shower rails, coat hooks, pipes and radiators, bedsteads, window and door frames, ceiling fittings, handles, toilets, hinges and closures.

Despite risk assessments and efforts to ensure the safety and wellbeing of all patients in our care, there may be a situation when a service user may attempt to ligature.

To safeguard all patients and staff working within Betsi Cadwaladr University Health Board (BCUHB), ligature cutters will be provided where a risk assessment has been carried out by the individual Divisions and where a subsequent risk has been identified. Where ligature cutters have not been deemed necessary, where there is a defibrillator available, utility scissors will be available, which can also be used to remove a ligature, if required.

2. PURPOSE

The purpose of this SOP is to inform all staff of the processes for the safe removal of a ligature.

3. APPROVED LIGATURE CUTTER

Although there are a number of implements which could be used to cut a ligature (utility scissors, knives etc.), BCUHB as an organisation has approved the use of the ResQhook, to be used **only in** high risk designated areas following local risk assessment. This must be used only for the purpose of cutting a ligature, and is not to be used for any other purpose. These will be stored in the 'Airway' drawer of the Resuscitation trolleys, or within the Resuscitation Grab bags in identified high risk areas. Once used, unless the ResQhook forms part of forensic evidence, it must be cleaned as per Infection Prevention policy (IPC17) using 'Clinell' wipes and returned to its designated storage.

Utility scissors form part of standardised equipment on all BCUHB resuscitation trolley/ grab bags wherever a defibrillator is available, and have the ability for 'next to skin cutting'. These can be found within the Automated External Defibrillator (AED) case of within the 'Airway' drawer of the resuscitation trolley.

Ligatures and garrottes come in many materials and forms and include, but are not limited to: rope, nylon tights, electric flex, cables, belts, bedding, cords from clothing, etc. This is not an exhaustive list.

4. LIGATURE RISK ASSESSMENTS

All clinical and non-clinical departments/areas within BCUHB are required to carry out environmental risk assessments, which should include ligature risk assessments of any space accessible to service users including enclosed recreational areas e.g. gardens. This is to ensure that ligature risks are identified and removed / replaced or managed. The work should be done in consultation with the Health and Safety / Estates departments where appropriate.

Further to the annual review, a mitigation plan with a timely review must also be in place and be made aware to all staff.

Any patient identified via risk assessment as being at risk of self-harm, must have this documented in their care plan. This must include appropriate control measures

As a minimum the following areas have been identified as requiring a ResQhook ligature Cutter:

- All Emergency Departments.
- All Acute Medical Admission Units.
- All Acute Surgical Admission Units.
- All 136 Suites or places of safety (which the Health board have responsibility. These will be found within the Resuscitation trolley closest to the 136 suite on the acute sites).
- All Mental Health and Learning Disability acute Inpatient Units within BCUHB.
- In Resuscitation grab bags at HM's Prison- Berwyn, as supplied by BCUHB Resuscitation Services.
- CAMHS in patient areas
- Acute Paediatric wards

There may be other areas that identify the need for ligature cutters in future.

The following process should therefore be followed:

- Completion of a risk assessment which clearly identifies the need for ligature cutters within the ward/department This should be escalated to the responsible Quality and Safety Committee (Q&S). Pan BCUHB Resuscitation Committee should be informed of Q&S approval of the requirement following review of the submitted risk assessment.
- Once placement of the cutters are approved, the area must obtain a ResQhook ligature cutters from their nearest Resuscitation Services Department.
- Training for all staff working within the newly identified clinical area must be undertaken and recorded onto the Electronic Staff Record (ESR) when completed as soon as possible following agreement to hold the ligature cutters obtained.

5. SAFE LIGATURE RELEASE

If you find a person with a ligature in situ immediately call for assistance. Ask another staff member to dial 2222, if on the acute hospital site and there is a Resuscitation team available, stating your location clearly without using abbreviations. If you are away from an acute site dial (9)999/112 for an emergency ambulance. If a patient is found with a ligature in the grounds of the main acute site or away from the main hospital building and require transfer to e.g. Emergency Department, call 2222 **and** 999/112.

All complete or incomplete suspension incidents must be considered high risk with regards to manual handling, because of the load involved and possible requirement to adopt awkward postures.

Staff should carry out a dynamic risk assessment and apply safe handling principles to the best of their ability in the situations that they find themselves.

Staff must not place themselves at unnecessary risk and must not attempt any technique or manoeuvre they feel would be hazardous for them.

Where the perceived risks involved with supporting the weight are considered too great, it may be appropriate to cut the ligature and allow the person to fall unhindered to the ground.

If the person resists attempts to remove the ligature, it may be necessary for staff to use appropriate physical intervention (call for assistance from hospital security if required).

Where a Do Not Attempt Cardio Pulmonary Resuscitation (DNACPR) decision has been made and a valid, signed form is in place it is of note that these are not legally binding and exist to guide/inform contemporaneous best interests' decisions. The clinician assessing the patient following attempted strangulation, whether he or she be a nurse, ambulance technician or doctor, is actually making the decision around the appropriateness of undertaking cardiopulmonary resuscitation. Where a patient has attempted suicide, treatment should favor the preservation of life where doubts exist about the patient's capacity when the DNACPR decision was made, but all clinical circumstances would need to be considered. For example did, did the patient seek medical attention? In this situation the ongoing validity of the decision could reasonably be questioned. In other situations it may be clear that attempted resuscitation is futile. More than one course of action can often be justified. Documentation needs to clearly outline the rationale for the contemporaneous decision.

5a. COMPLETE SUSPENDED STRANGULATION (HANGING)

The priorities are to release the pressure the ligature is causing on the neck and to remove the ligature.

Where possible the patient should be elevated by taking a secure hold around the thighs or hips to reduce the tension on the ligature.

This can be particularly useful to reduce airway compromise if staff are not able to cut the ligature immediately, and will enable the patient to be supported when the ligature is cut.

It may be safest to approach from the front so that the patient will fold towards the shoulder (i.e. towards the handler, and not away from them) after the ligature is cut.

All strangulation attempts should be treated as a suspected spinal injury. Staff should support the neck and head to the best of their ability in these circumstances.

As soon as the body weight is supported or handlers / staff are clear, the ligature should be cut using the most appropriate piece of equipment closest to hand. Certain designated areas will have the ResQhook ligature cutter, alternatively utility scissors may be suitable. Cut at a central point between the patient's neck and the suspension point so that there is minimal interference with any potential evidence. Staff must **NOT** pull on the ligature to remove it.

Staff should **NEVER** cut through a live electricity cable without first disconnecting/unplugging this type of ligature from the power first. Should a connected electrocardiogram (ECG) cable be used as a ligature there are no high voltages present. Cutting the ECG cable would therefore present no risk of electrocution. It is worth noting that to be certain, and to ensure it is not a mains cable being used it may be safer to disconnect any mains power before proceeding going to cut the cable.

If supported, the person should then be lowered to the floor.

If the ligature remains in place around the patient's neck it should be removed using the most accessible piece of equipment available. This may be the ResQHook in designated areas or utility scissors.

Staff should make every effort to cut the ligature at a point that is distant from any knot. Appropriate airway management / resuscitation techniques must be applied as needed.

An assessment for laryngeal injury should be made as soon as possible by a suitably trained healthcare professional such as a paramedic, anaesthetist etc.

5b. INCOMPLETE SUSPENDED STRANGULATION (SEMI SEATED OR KNEELING)

The priorities are to release the pressure the ligature is causing on the neck and to remove the ligature.

Where possible, the patient's upper body (and head) should be supported and elevated by taking a secure hold around the upper torso (and head) to reduce the tension on the ligature.

This is useful to reduce airway compromise if is not possible to cut the ligature immediately, and will enable the patient to be supported when the ligature is cut.

Staff must **NOT** pull on the ligature to remove or unhook it.

As soon as the body weight is supported, or handlers / staff are clear, the person should then be lowered maintaining manual inline stabilisation of the patient's neck to protect from potential further spinal damage.

Once lowered, staff should apply appropriate airway management techniques.
If the ligature remains in place around the patient's neck it should be removed using the ResQhook or utility scissors.

Staff should make every effort to cut the ligature at a point that is distant from any knot. Appropriate airway management / resuscitation techniques must be applied as needed.

An assessment for laryngeal injury should be made as soon as possible by a suitably trained healthcare professional such as a paramedic, anaesthetist etc.

5c. LYING STRANGULATION

Staff should slide the patient towards the point of suspension, using slide sheets if possible, to reduce the tension on the ligature before removal.

Staff should make every effort to cut the ligature at a point that is distant from any knot. Appropriate airway management / resuscitation techniques must be applied as needed.

An assessment for laryngeal injury should be made as soon as possible by a suitably trained healthcare professional such as a paramedic, anaesthetist etc.

6. USE OF UTILITY SCISSORS AND THE RESQHOOK LIGATURE CUTTER

Regardless of which piece of equipment is used to cut through a ligature:

- Always cut the ligature at the thinnest point possible.
- Avoid knots in order to make the cut as fast and as easy as possible and in order to preserve forensic evidence.
- Attempt cardiopulmonary resuscitation (CPR) if appropriate.
- After use of the utility scissors to cut through a ligature, unless required for forensic evidence, dispose of them in the sharps bin and replace immediately from the Resuscitation Services consumables cupboard or contact your nearest Resuscitation Services department.
- After use, clean the ResQhook (as per ICP17) and return to safe storage or arrange for a replacement if damaged or removed as required for forensic evidence. Replacement ResQhooks will be available from the acute site Resuscitation Consumables cupboards or by ringing your nearest Resuscitation Services Department.

In the event of needing to use the ResQhook to remove a ligature and there is any doubt surrounding their integrity and sharpness, please consult manufacturers guidance on re-sharpening. If re-sharpening is required please ensure a replacement ResQhook is obtained.

If utility scissors have been used, please dispose of these and replace with a new set, available from Resuscitation Services.

6a. UTILITY SCISSORS

These are widely available throughout the Health Board wherever there is a defibrillator as part of the emergency resuscitation equipment. The make of utility scissor provided by BCUHB Resuscitation Services department (Timesco) has a product liability (dated February 2018) stating they are suitable to cut through a ligature. In areas not identified as high risk for patients who may self-harm, the utility scissors are a suitable alternative for health board staff to use to remove a ligature.

The scissors are designed with a lower blade which has a rounded hook enabling easy insertion underneath the ligature to aid cutting. In order to remove the ligature, slide the lower blade with the blunted hook, under the material to be cut. Where possible access at the side of the neck where it is softer. Avoid pulling on the ligature. There is a serrated edge to the lower blade which aids grip of the material being cut whilst the top blade is brought down to cut through the ligature.

6b. RESQHOOK

The ResQhook knife is only sharp on the inside of the hooked blade. The outer blade edge of the hook rescue knife is blunt and will not cut the patient/service user if used correctly.

For easy insertion of the blade, hook the curved blunt edge of the knife under the material to be cut, where possible at the side of the neck where it is softer with the blunt side of the hook to the skin. This will reduce any pulling onto the airway when cutting (as would occur if inserted at the back of the neck), and reduce likelihood of causing further trauma to the airway (as may occur if inserting from the front of the neck).

Using the sharp edge of the blade, make the cut at right angles to the material using a downward motion (to avoid inadvertently cutting skin or flesh).

7. PRESERVING FORENSIC EVIDENCE

If the person is subsequently pronounced dead, or there are suspicious circumstances, the police must be informed immediately.

The police will treat any such death as ‘unexplained’ and potentially a crime scene until proven otherwise.

Do not touch or disturb the area or other evidence including the ligature cutter, until the police give permission (apart from essential actions required to make the area immediately safe for service users).

Do not cut or untie the knot of the ligature and leave the other end attached to the ligature point to preserve forensic evidence.

The Police may want to keep the utility scissors or ResQhook ligature cutter as evidence.

Report the incident on to the web based incident reporting system, DATIX, and escalate to line manager.

8. SAFE AND SECURE STORAGE

Utility scissors will be stored within the Resuscitation trolley, grab bag or defibrillator case held in all areas throughout the Health Board. Staff must ensure RES03 policy is complied with in relation to the checking of the equipment held, the frequency of checking and, under no circumstances must equipment be added to or taken away from the trolley or grab bag. Any amendments or additions must be discussed and agreed by the Pan BCUHB Resuscitation Committee.

In areas where a risk assessment has identified the need for a ResQhook ligature cutter it will be stored within the ‘Airway’ drawer of the sealed Resuscitation trolley or alongside Airway and Breathing support equipment within the sealed Resuscitation bags. This location will be standardised across the Health board to enable staff to be familiar and to aid prompt access should the need arise. Mental Health and Learning Disability areas within BCUHB will hold additional ResQhook ligature cutters to be stored in additional locations. Other areas such as acute Paediatrics and Child and Adolescent Mental Health Services (CAMHS) may have additional ligature removal equipment available. This SOP is designed to cover the minimum level of ligature removal equipment that should be available and their use across the Health Board.

Utility scissors or ligature cutters could potentially be used as a weapon or to self-harm therefore it must be stored safely where it is not visible to patients or service users.

9. TRAINING AND RESPONSIBILITIES

The ward/unit manager and matron will:

• Ensure that all staff are aware of this SOP as part of their induction.

• Ensure that responsibilities within this SOP are adhered to.

• Ensure that all appropriate staff know how to use the utility scissors and where applicable, the ResQHook ligature cutter and know where it is stored. Resuscitation Training for clinical staff will include within it an awareness of the use of utility scissors and the ResQHook to remove a ligature. A mandated online training programme to include an assessment of knowledge will need to be completed for those staff who will have the ResQHook ligature cutter in their place of work.

Please click on the link below which will take you to the online training and assessment page. Please print off the results sheet and hand to your manager.

https://www.smartsurvey.co.uk/s/565214YQM37/

10. INVESTIGATION OF INCIDENTS

All incidents of attempted self-harm by an inpatient must be reported via the DATIX system. If hanging by ligature is as a result of failure to install functional collapsible shower or curtain rails then this is reportable to the Welsh Government as a Never Event.

All inpatient incidents of attempted or actual self-harm must be investigated by an appropriate investigating officer. The Serious Incident Review process ensures information captured in the report, including any further actions to be taken to prevent reoccurrence and lessons learned can be shared widely throughout BCUHB.

11. SUPPORT FOR STAFF AND OTHERS INVOLVED

All staff involved in the incident should be given the opportunity to review the incident including their roles and feelings relating to what happened. Information/support following an incident can be accessed via the CARE Advisory Team in Occupational Health who will sign post to the relevant Occupational Health Practitioner.

Staff should also ensure other service users, patients, or other witnesses who may have an awareness of the incident have any identified support offered and an opportunity to reflect on the incident and this review should be documented in their records.

Similarly, any patient / service user who has attempted self-strangulation must be offered appropriate support as identified after such an incident, at the earliest opportunity.

12. PERSONNEL INVOLVED IN THE DEVELOPEMNT OF THE SOP:

Name	Title
Rebekah Roshan	Head of Nursing MHLD - East
Simon Newman	Head of Healthcare, HMP Berwyn
Janette Hamilton	Lead Nurse Clinical Governance, West
Tracey Radcliffe	Lead Nurse Clinical Governance, Central
Tracey Harris	Lead Nurse Clinical Governance, East