

Non-Fatal Strangulation Documentation **TOOLKIT**



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PREFACE

In 1992, the International Association of Forensic Nurses (IAFN) was created by a group of nurses who recognized violence as a healthcare problem. Over the past three decades, much progress has been made as it relates to the care of patients affected by violence. Through this progress, knowledge has been gained and practice guidelines continue to evolve with the goal of continuous provision of safe and effective patient care. In early 2015, IAFN identified the need for practice guidance related to the evaluation of the patient who has experienced non-fatal strangulation. A task force of experts convened to develop an associated toolkit for clinical use. The following is the second edition of the toolkit, updated in 2022.

The Strangulation Toolkit provides clinicians with detailed information on the existing evidence-base, as well as guidance on assessment techniques, evidence collection, and documentation when caring for a patient who has experienced strangulation. This toolkit also provides sample policies, documentation tools, and discharge instructions that can be adapted to best suit institution and practice needs. The toolkit components represent the minimum documentation expectations of clinicians caring for this patient population.

Additional studies are needed to provide optimal care to adult, adolescent, and pediatric patients who are victims of non-fatal strangulation. Research regarding the short and long-term health consequences of non-fatal strangulation is limited. Standardizing the associated evaluation and documentation will further the healthcare profession's ability to add to the available evidence-base as it relates to commonality of signs and symptoms, risk for delayed lethality from carotid artery dissection, occlusion, thrombosis, and/or stroke, as well as mental health consequences (Patch et al. 2017, Patch et al., 2022). Studies exploring non-accidental strangulation injuries in the pediatric patient are sparsely represented in the published literature. Patients who have experienced physical or sexual abuse may have endured non-fatal strangulation and should receive an appropriate clinical evaluation. As such, IAFN encourages adopting these documents as-is, or adding to them rather than reducing the elements currently recommended.



PURPOSE

This document was created to identify and outline a standardized approach to the medical forensic examination and documentation of the patient who has experienced non-fatal strangulation (See [Appendix A](#) for Institutional Policy Example).

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PATIENT CONSENT AND REPORTING OBLIGATIONS

Before utilizing the components of this toolkit, it is imperative to address patient rights. Patients have the right to decline any assessment, including a strangulation assessment, they have the right to decline photography of their injuries, and they have the right to decline evidence collection. An explanation of the procedures themselves, rationale for conducting them, how the information or evidence will be used, and the option to decline any or all of the examination are components of informed consent. Informed consent must be obtained before assessing patients who have been strangled.

In some states, territories, or jurisdictions strangulation may not require a mandatory report to law enforcement by healthcare providers. Strangulation-specific laws may be in place, and healthcare providers should be familiar with the laws in their location of practice. These laws may overlap, align, or compete with other existing laws regarding other types of violence frequently seen co-occurring with strangulation, such as sexual assault and intimate partner violence laws. Both of these categories of laws may have exceptions to mandatory reporting obligations for healthcare providers, therefore being familiar with what they are and how they intersect is crucial.

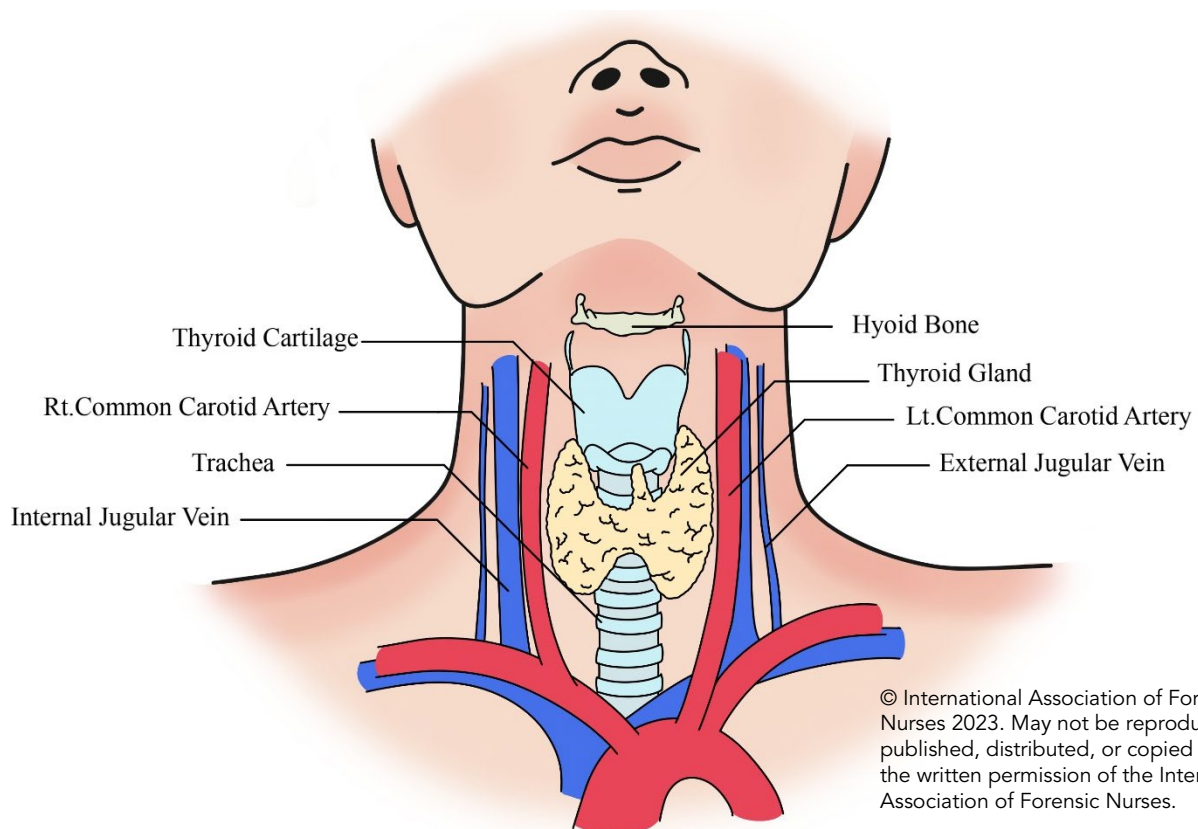
In the event that the patient has the option to not make a law enforcement report, evidence will likely not be collected. Refer to the local state, territory, or jurisdiction for protocols regarding evidence collection in strangulation.

STRANGULATION ASSESSMENT, DOCUMENTATION, AND EVIDENCE COLLECTION GUIDELINES

DEFINITION

Strangulation is a form of asphyxia produced by the occlusion of blood vessels and/or the respiratory passage as a result of external pressure applied to the neck. The three types of strangulation include hanging, ligature, and manual strangulation. Hanging strangulation occurs when a ligature around the neck is tightened by the gravitational weight of the person's body or part of the body. Ligature strangulation occurs when material, such as a cord, suture, or rope, is placed around the neck and is then tightened by a force other than the weight of the body. Manual strangulation occurs when hands, arms, or legs are used to apply external pressure to the neck (Ernoehazy, 2016; Taliaferro, Hawley, McClane & Strack 2009; Sauvageau & Boghossian, 2010).

ANATOMY OF THE NECK



MUSCLES The major neck muscles are the sternocleidomastoid and trapezius. These muscles are innervated by cranial nerve XI, the spinal accessory nerve. The sternocleidomastoid muscle divides each side of the neck into two triangles. The anterior triangle lies between the sternocleidomastoid and the midline of the body, with its base up along the lower mandible and its apex at the suprasternal notch. The posterior triangle is behind the sternocleidomastoid muscle, with the trapezius muscle on the other side and with its base along the clavicle below. These triangles are helpful guidelines when describing findings in or on the neck.

Despite their size, the trapezius muscles are not often injured as a result of strangulation, due to their posterior location. Injuries are more commonly seen in the sternocleidomastoid, levator scapula, scalenes, and hyoid muscles (thyrohyoid, omohyoid, sternohyoid, sternothyroid), making the assessment of these extremely important (Deininger-Czermak et al., 2020; Marty et al., 2020).

AIRWAY The trachea, more commonly described as the “windpipe,” lies anteriorly to the esophagus. The trachea is supported by rings made of cartilage. The superior tracheal ring, also known as the cricoid cartilage, is positioned inferiorly to the thyroid cartilage. At this point, a small palpable notch can be palpated. The trachea extends just below the sternal angle, where it bifurcates into the right and left main bronchi. The hyoid bone lies between the mandible, or jawbone, and the thyroid cartilage, and is attached to the floor of the oral cavity.

The larynx, positioned at the base of the anterior triangle of the neck, is a midline structure composed of a cartilaginous core with interconnecting membranes and associated musculature. The larynx houses the vocal cords, assists with airway protection, and regulates intrathoracic and intra-abdominal pressures.

VESSELS The major vessels in the neck include the right and left common carotid arteries, and the right and left internal and external jugular veins. The carotid arteries are located in the groove between the trachea and the sternocleidomastoid muscle. The larger internal jugular veins lie medial to the sternocleidomastoid muscle. The external jugular veins are more superficial and lie lateral to the sternocleidomastoid muscle, above the clavicle.

NERVES

The cranial nerves enter and exit the brain rather than the spinal cord and assist with sensory function of the head and neck, with the exception of the vagus nerve. The vagus nerve travels to the heart, respiratory muscles, stomach, and gallbladder. The olfactory and optic nerves originate from the cerebrum, while the other ten cranial nerves originate from the brainstem. The larynx is not innervated directly by any of the cranial nerves, but the superior and recurrent laryngeal nerves are branches off the vagus nerve.

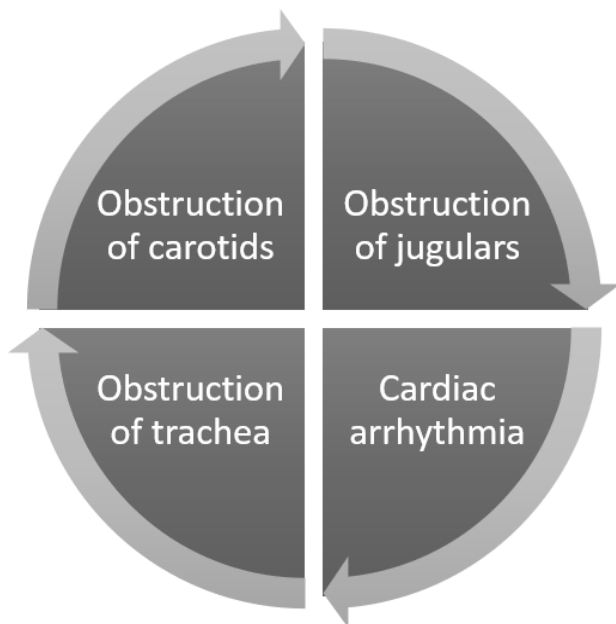
PEDIATRIC HIGHLIGHT

Research with children is limited, even though children can be presumed at great risk of life-threatening injuries if strangled, due to the variation in anatomy and physiology compared to adults. Children have a relative lack of ossification of the laryngeal cartilages and hyoid bone and a higher risk of airway compromise due to small size (Stellpflug et al., 2022). The laryngeal position changes throughout life. In infants and toddlers, the larynx is further superior, allowing air to move directly from the nose to the trachea, enabling infants to swallow liquids and breathe almost simultaneously (Allen, Minutello, & Murcek, 2021). It is thought that in pediatric strangulation the primary mode of injury may be venous congestion resulting in cerebral edema and unconsciousness, followed by airway obstruction (Kline-Fath et al., 2021; Sep & Thies, 2007). Mild soft-tissue edema of the neck along with subcutaneous air consistent with air leaks as well as bilateral lung opacities, pneumomediastinum and pneumothoraces have been noted in children who have been strangled (Kline-Fath, et al., 2021). Cognitive and developmental differences may make it difficult for a child to effectively describe the strangulation event (Baldwin-Johnson & Wiese, 2015). Strangulation should be on the list of differential diagnoses in children who present with suspicion or disclosure of sexual or physical abuse (Prosser et al., 2018)



PATHOPHYSIOLOGY OF STRANGULATION

Asphyxia is insufficient oxygenation of the brain and occurs during strangulation when oxygenation of the brain is interrupted by the occlusion of blood vessels and/or the respiratory passage. When external pressure on the neck obstructs the carotid artery, oxygen delivery to the brain is impeded and results in oxygen deprivation. If the jugular vein is obstructed, removal of deoxygenated blood from the brain is impeded and causes increased carbon dioxide in the brain. The obstruction of the respiratory passage prevents the lungs from receiving oxygen, yielding decreased oxygen in the circulating blood.



The majority of deaths from strangulation occur during the actual event via one of four mechanisms:

1. Obstruction of the cardiac arteries: The inability to carry oxygenated blood from the heart to the brain.
2. Obstruction of the jugular veins: The inability to carry deoxygenated blood down to the heart
3. Obstruction of the trachea: The inability to carry oxygen to the lungs.
4. Cardiac arrhythmia: Irregular heartbeat (too fast, too slow, or simply irregular) resulting in cardiac arrest.

STRANGULATION INJURIES

Strangulation can result in a variety of injuries, including but not limited to the soft tissues of the neck, esophagus, larynx, trachea, cervical spine, and the laryngeal and facial nerves. (Hawley et al., 2001; Shields et al., 2010; Smith et al., 2001; ; Patch et al., 2017). A rare medical complication that can occur in strangulation is acute bradycardia and/or cardiac arrest related to pressure on the carotid sinus (Taliaferro et al., 2009).

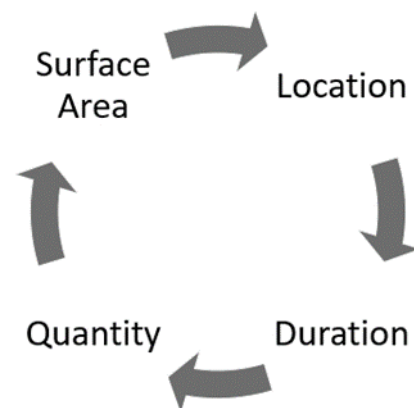
Along with physical injuries, patients can experience psychological and emotional complications as a result of strangulation, such as nightmares, memory loss, depression,

insomnia, among many others (Smith et al., 2001). However, despite a lack of visible injuries, it is important to keep in mind that this does not mean the strangulation did not occur (Shields et al., 2010.)

FACTORS IMPACTING STRANGULATION

Injuries and complications from strangulation are affected by several variables. In addition to the assault details and mechanism of strangulation, there are four main variables to consider (Strack, McClane, & Hawley, 2001):

1. The exact anatomic location of the applied force.
2. The quantity of the applied force.
3. The duration of the applied force.
4. The surface area of the applied force.



One might assume the more times a strangulation occurred, the more severe the injuries or complications. However, this is an inaccurate assumption. Consideration must also be given to how much force or pressure was applied, where it was applied, for how long, and what the dispersion of the pressure was. Differences and alterations in these variables directly impact the severity of the strangulation and potential for injury.

HISTORY/PATIENT DESCRIPTION OF THE STRANGULATION EVENT

Document the patient's history and description of the strangulation incident using the patient's own words as much as possible (U.S. Department of Justice, Office on Violence Against Women, 2013). Use quotation marks when documenting the patient's descriptive comments verbatim. Other types of violence often occur during or near the time of the strangulation, such as hitting, punching, pushing, etc., and should be captured. It is also important to document if the strangulation occurred during a sexual assault. A child or vulnerable adult providing a history of strangulation is diagnostic of physical abuse and must be reported to child/adult protection services and law enforcement.

The patient history guides clinical decision-making for assessment, diagnosis, and treatment. The symptoms of strangulation are meant to provide information about the anatomical structures affected during and after the strangulation, which allows for the identification of current and potential medical complications the patient may be at risk for. All of this information guides clinical decision-making for assessment, diagnosis, and treatment.

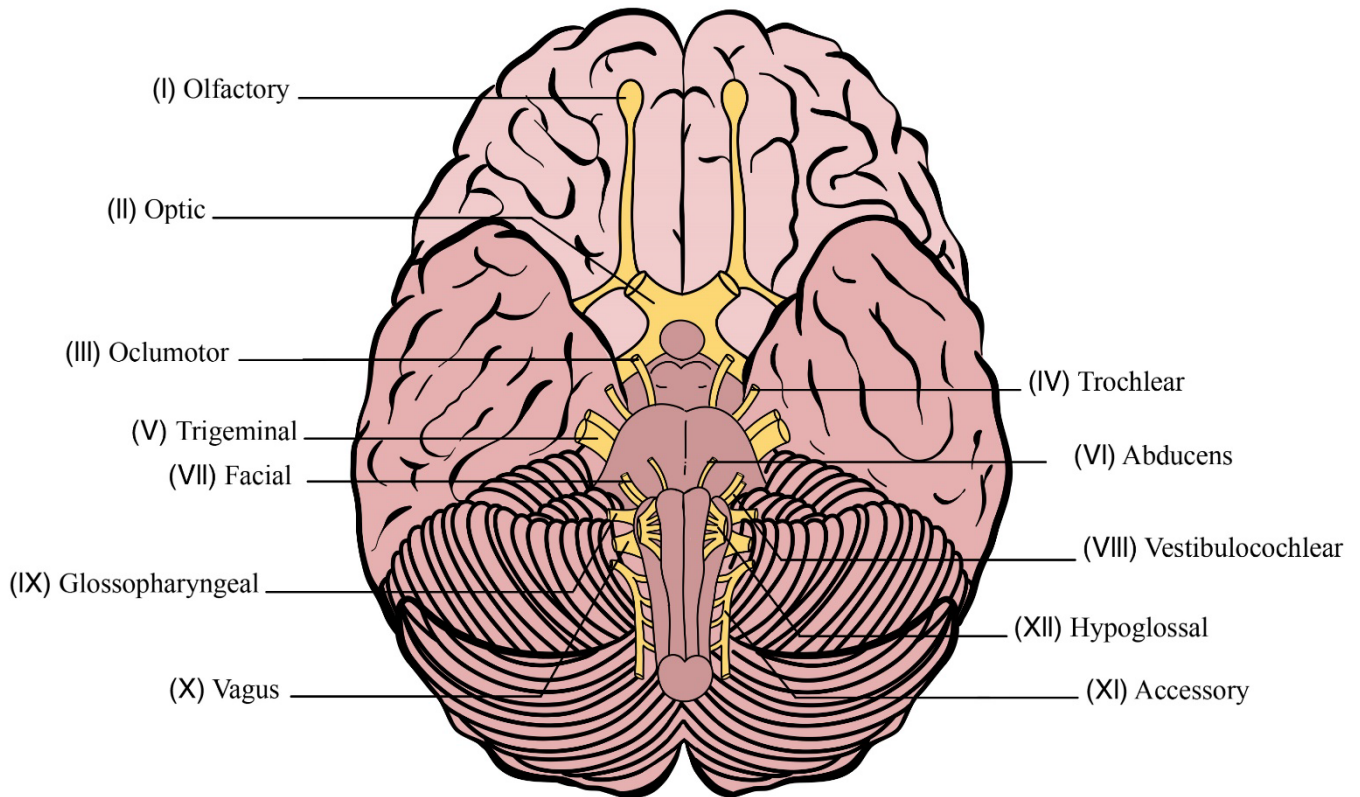
The symptoms that occurred with the strangulation incident should be separated and documented into three distinct time frames. 1) During the strangulation; 2) Immediately after the strangulation ends; 3) Currently, at the time of the exam. Once the patient has provided a history, ask any necessary clarifying questions. (See [Appendix C](#) and [Appendix D](#) for history-taking questions).

CLINICAL TIP

It is not uncommon for patients to delay seeking care by one or several days. Regardless of the timing of patient presentation, it is important to ask the same assessment questions. For example, patients may have a sore throat, neck pain, or a headache for several days after the incident, but it may be resolved by the time they come in for care. It is imperative that this information is captured this as a part of the diagnosis and treatment plan.

ASSESSMENT AND DOCUMENTATION OF PHYSICAL FINDINGS/DESCRIPTION OF INJURIES

A comprehensive physical assessment should be completed, with a focus on areas impacted by the strangulation and history provided by the patient. Thoroughly examine the head, face, eyes, ears, nose, throat, jaw line, and neck. Assess the scalp, ears, face, sclera, conjunctiva, lips, and oral cavity, including the oropharynx. Complete a cranial nerve assessment.



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Document the injuries on a body diagram. Describe each injury separately and include the location, shape, color, and size of the injury. Use a consistent unit of measure (i.e.: centimeters or inches) for all injuries. Note length, width, and depth of each injury, if possible. Include any statements made by the patient about the injury, i.e.: "this is where he grabbed my neck" and "that mark wasn't there before he strangled me." Attach additional pages if needed. Also describe the patient's appearance, behavior, speech, eye contact, and affect/demeanor using objective descriptors (see [Appendix B](#) for an example Assessment Tool).

Assess for and document the following signs, symptoms, and/or injury:

- Voice changes: Dysphonia (defined as hoarseness) or aphonia (defined as severe or complete loss of voice)
- Swallowing changes and tongue swelling: Dysphagia (defined as difficulty swallowing) or odynophagia (defined as painful swallowing)
- Breathing changes: Dyspnea (defined as difficulty breathing)
- Visible injuries on the neck and mastoid: Ligature marks/edema/abrasions (scratches and scrapes)/erythema/contusions
- Oral cavity injuries
- Petechiae: Eyelids/peri-orbital region/face/scalp/neck/ears/soft palate/under tongue
- Subconjunctival/Scleral hemorrhage/Scleral edema (eyes)
- Neurological findings: Ptosis/facial droop/unilateral weakness/loss of sensation/paralysis/seizure
- Assess for any mental status changes (restlessness, irritability, combativeness, amnesia, psychosis, etc.).
- Miscarriage/Pregnancy – fetal heart tones and last menstrual period
- Lung injuries: Aspiration pneumonia/pulmonary edema
- Crepitus/subcutaneous air (neck/chest/face)
- Abnormal carotid pulse
- Absence of normal crepitus felt during manipulation of cricoid cartilage
- Pain, swelling, erythema, contusion, abrasion, petechiae, bite marks, knife wounds, or gunshot wounds on any other area of the body (i.e., chest, back, upper extremities, lower extremities)

(Christe et al., 2009; Faugno, Waszak, Strack, Brooks, & Gwinn, 2013; Funk & Schuppel, 2003; Gwinn & Strack, 2013; Hawley, McClane, & Strack, 2001; Strack & McClane, 1999; Taliaferro, Hawley, McClane, & Strack, 2009).

DANGER ASSESSMENT

A lethality assessment is an evaluation that predicts the likelihood of serious injuries or death. Lethality Assessment Programs (LAP) are a common tool used by law enforcement to screen victims of domestic violence for potential lethality and connect them to service providers (Richards et al., 2020). It provides an easy and effective method to identify victims of domestic violence who are at the highest risk of being seriously injured or killed by their intimate partners (John Hopkins School of Nursing, 2023). Lethality assessments help to identify risk factors, obstacles, and resources for safety planning, provide clear language to use with patients to guide questions and conversations, and guide patient education needs. The most commonly used lethality assessments in the medical setting is the Danger Assessment.

The Danger Assessment (DA) tool was developed by Dr. Jacqueline Campbell in 1986 with consultation and content validity support from women who were assaulted by intimate partners, shelter workers, law enforcement officials and other clinical experts (Campbell, 2004; Campbell et al., 2009). This tool is used to assess for potential lethality of women in violent relationships; it has only been validated for the use of females abused by male partners. The tool consists of two parts. The first is a calendar portion designed to raise consciousness of the violence, and includes a 1-5 severity scale. It was also found that using the calendar increases accurate recall. The second part of the tool consists of 20 yes/no questions. Using the DA requires the weighted scoring and interpretation that is provided after completing the required training. This tool is often used in conjunction with a strangulation assessment, as it includes assessing for past strangulation.

The limitation of this tool is that it is not a validated risk assessment instrument for male victims or victims in a same-sex relationship (Danger Assessment, 2023). The DA-R is a validated tool to predict risk of re-assault of women who are in a same-sex relationship, and the DA can be adjusted for gender neutrality, however this impacts its validation as a risk assessment instrument. Additionally, low scores on the tool should not be overlooked, especially if patient statements include a fear of homicide.

For more information, please visit <https://www.dangerassessment.org>.

There are other tools that have been identified for use to assist with understanding risk and lethality in the context of intimate partners. When determining which tool to use in your practice consider reliability and validation and which one is appropriate for your clinical

setting (Garcia-Vergara et al., 2022). Regardless of which tool is utilized, there is still a need for ongoing analysis of the risks as there are limitations and gaps in these tools that need to be considered and explored. Overall, safety planning, thorough discharge instructions and comprehensive follow-up and referrals are imperative aspects of the assessment.

NECK MEASUREMENT

The use of a tape measure by healthcare providers to measure swelling/edema in extremities is a common practice. Although tape measuring is one of the tools used for assessing neck lymphedema in oncology, there is no gold standard for the practice, it is not used as the sole assessment tool, and it does not have excellent reliability. The reliability of using a tape measure as an assessment tool to measure neck swelling post-strangulation has not been studied.

Should neck measurement be a part of the clinical practice, the measurement needs to be reliable. Measurements should be taken in a consistent setting, by the same provider, at the same marked location on the upper, mid, and lower neck. It is important to measure the patient in the same position and using the same type of measuring tape each time so the exact location is measured later for comparison. Without a clearly defined location, the reliability of the measurement decreases, and there is a larger margin of error if the comparison measurement is obtained by someone other than the person who completed the original measurement.

Due to the lack of evidence-based research to support the use and reliability of neck measurements on patients who have been strangled, the use of a tape measure as an assessment tool post-strangulation cannot be routinely recommended. If this assessment tool is utilized, the measurement results should be interpreted with caution and not relied upon as the sole assessment for determining the presence or absence of neck edema post-strangulation. In addition, caution is advised on providing any testimony in criminal or civil court on the use of neck circumference measurement as the basis for the presence/absence of neck swelling post-strangulation.

PHOTOGRAPHS

Use your facility/community protocol. If no protocol is available, consider these guidelines:

- Take medium-range photographs of each separate injury, including cuts, bruises, swelling, lacerations, and abrasions. Work from one side of the body or extremity to the other and then top to bottom or design a workable method. Be consistent. Take “regional” shots to show injuries in the context and orientation of a body region; these photographs should include easily identifiable anatomical landmarks.
- Take closeup images of particular injuries utilizing the scale. When photographing a wound, show its relationship to another part of the body. Take at least three photographs involving a wound area. Shield uninvolved breast or genital areas when possible; highly graphic photos may be deemed inadmissible in court and make the case less credible. All injuries should be recorded with a closeup view using a macro lens or setting. Attempt to capture subtleties in texture, color, and patterned injuries caused by an object.
- In some cases, a full body photograph may be appropriate to show scope of injury or state of clothing. However, such photos should ensure as much modesty and privacy as possible through draping and other techniques.
- Follow up photographs can be taken, when possible. The length of time between initial exam and follow up is determined by patient’s need and availability. Generally, follow up photographs are taken within 24 - 72 hours of initial exam.

(Funk & Schuppel, 2003; Martin et al., 2022; Paluch, 2013; Strack & McClane, 1999).

COLLECTION OF EVIDENCE

DNA testing techniques have substantially improved in recent years and are able to detect small amounts of DNA even when touch is the only mechanism for transfer (Graham & Ruddy, 2008). National best practices suggest that communities should be considering this type of evidence collection in strangulation cases (U.S. Department of Justice, 2017).

Consult your local forensic laboratory for recommendations. If no protocol is available, use the guidelines listed below.

- Collect known DNA reference sample (i.e.: buccal swab) for comparison if any swabs are collected for evidence.
- Collect swabs for dried and moist secretions (i.e. blood, saliva) and for touch DNA from the body, when indicated by the patient's history.
- Follow jurisdictional policy and local forensic laboratory recommendations for swab collection procedures.
- Collect fingernail swabs, when indicated by the patient's history and local forensic facility protocol or recommendations.
- Follow jurisdictional policy and local forensic laboratory recommendations for packaging of swabs collected (U.S. Department of Justice, 2017; Gwinn & Strack, 2013; Hawley et al., 2001).
- Use of alternate light source (ALS)/ultraviolet (UV) light for identification of potential biological fluids and/or for enhancement of visible bruises, not to be used to identify bruises that cannot be seen with the naked eye (Eldredge et al., 2012).

RADIOLOGY STUDIES (AS INDICATED BY MEDICAL PROVIDER)

A regularly asked question is whether to obtain imaging, particularly computerized tomography (CT) scans of the neck for all adult patients following reported strangulation assaults. Imaging allows for identification of life-threatening conditions, such as laryngeal fractures and arterial dissections, with CT angiogram (CTA) of the neck considered the gold standard (Stellpflug et al., 2022). Recent research demonstrates that vascular injury following strangulation is an infrequent finding: just 1.5% of patients had positive vascular injury on CTA following non-fatal strangulation in a study out of Australia; 2.1% in a US study (Williamson et al., 2021; Zuberi et al., 2019). Low incidence of vascular injury combined with concerns about issues such as radiation exposure (not fully understood based on limited research, particularly in cases of multiple exposures and younger patient populations) and costs incurred by the patient make it difficult to justify routine CTA in non-fatal strangulation. However, just because an issue is infrequent doesn't mean it doesn't occur, and statutory (e.g. EMTALA) and ethical obligations require clinicians to make determinations based on more than simple probabilities.

Ultimately, in the absence of well-validated protocols, clinicians need to make decisions on a case-by-case basis. “It is reasonable to pursue advanced imaging of the neck for patients with a Glasgow Coma Scale score <15, focal neurologic symptoms, clear signs of airway injury, or dysphagia (Stellpflug et al., 2022, p. 3).” Clinicians may also choose to obtain images on patients with significant visible neck injury, even in the absence of other symptoms.

SAFETY PLANNING

Safety planning is an ongoing process throughout any patient encounter and is centered around a provider’s detailed assessments. One of these assessments, discussed in detail previously in the toolkit, is a risk and/or lethality assessment. Utilization of a validated risk and lethality assessment tool can assist with establishing a safety plan when non-fatal strangulation occurs in the context of intimate partner violence. The knowledge that non-fatal strangulation is associated with more than six-fold odds of that patient becoming an attempted homicide, and greater than seven-fold odds of that patient becoming a completed homicide, can be used to help educate and implement a more effective strategy upon discharge. (Glass et al., 2008). Advocacy and wrap-around services are an integral role in the continuum of safety and if the criminal justice system is involved at the time of discharge, a collaborative approach can assist with safety planning. Finally, creating effective discharge instructions is an effective tool in helping patients, regardless of the context of the non-fatal strangulation, comprehend the information provided on the determined safety plan and the indications for medical follow-up and return. (See Appendix F for example Discharge Instructions). (U.S. Department of Justice, Office on Violence Against Women, 2013.) The need to establish clear communication about risk and lethality assessment findings and the implications for returning to an abuser while establishing a more permanent safety plan; signs and symptoms to be aware of after a strangulation, when to return or seek medical care, and to assist with follow-up appointments; how to follow-up or establish communication with law enforcement for reporting or when safety is at risk are all key aspects of safety planning.

MULTIDISCIPLINARY RESPONSE

When establishing any protocol within your program or community, incorporation of the Multidisciplinary Team is essential for a successful implementation (U.S. Department of Justice, Office on Violence Against Women, 2013). Having incorporated a non-fatal strangulation protocol within a community response has been shown to improve response to victims with legal and medical needs being increasingly met. (Fukushima et al., 2020). This includes buy-in from team members on the full spectrum of the response such as: law enforcement, medical, prosecution, advocacy, dispatch, shelter staff, social services and whoever is appropriate for your community.

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APPENDIX A – SAMPLE POLICY AND PROCEDURE

[Download](#) a MS Word version of this policy.

Institution Name
Other identifiable information as expected under facility policy

POLICY AND PROCEDURE

Strangulation Medical Forensic Examinations in the Emergency Department	
Effective Date:	Replaces Policy:
Approval Date:	Policy Owner: Emergency Department

Introduction:

Non-fatal strangulation is a serious health concern with the potential for lifelong consequences. Defined as external pressure to the neck that occludes the airway and/or blood vessels (Midttun, 2021), strangulation impedes oxygenation and can result in acute and long-term injuries (Le Blanc-Lowry, 2013), psychological terror (Thomas et al., 2013), brain trauma (Campbell et al., 2018), and even death (Petrosky et al., 2017).

Equipment:

- Camera
- Evidence collection supplies (swabs, sterile saline or water, envelopes, paper bags, evidence tape, chain of custody, etc.)
- Measuring standard that identifies size (centimeters or inches) and color (black and white)
- Gloves

Preparation of Equipment:

Inspect all equipment to ensure no defects, need for cleaning or expiration.

Definitions:

Strangulation: A form of asphyxia (lack of oxygen) characterized by closure of the blood vessels and/or air passages of the neck as a result of external pressure on the neck (Iserson, K., 1984; Line, Stanley, & Choi, 1985).

Medical forensic exam: A medical forensic exam (MFE) is any examination and treatment of a patient that offers/collects evidentiary material as part of the patient exam options, or has the possibility of ending up in the criminal or civil justice systems.

Policy:

In addition to the health concerns, non-fatal strangulation may necessitate collection of evidentiary specimens, safety planning and follow-up. In addition to the emergency department (ED) provider and staff, it is the expectation that when strangulation is suspected or disclosed as part of the history, the forensic nurse examiner (FNE) will be a collaborative part of the response team.

General Information:

An ED provider will provide medical screening exams for all strangulation patients. The first priority of ED personnel is to provide appropriate medical care for any life-threatening injury that may be present.

Procedure

1. Patients presenting to the ED with complaints of recent strangulation will be registered and moved to a private patient room as soon as possible.
2. Patients will be triaged to determine the need for medical treatment related to assault. Treatment of life-threatening injuries will take priority.
3. The FNE will be contacted as soon as the ED is aware of patient arrival.
4. In the event of serious/life threatening injuries, the medical forensic exam will be delayed until it can be performed without interfering with critical/trauma care.
5. After appropriate triage and emergency treatment, the Forensic Nurse Examiner (FNE) will:
 - a. Obtain consent for the exam, including photography consent
 - i. If the patient is a minor, obtain consent from a custodial parent, or by those with emergency custody of the child whenever possible
 - ii. Patient assent required for minors

- b. Discuss any mandatory reporting requirements and patient's desire to report to law enforcement
 - c. Obtain a detailed history of the strangulation
 - d. Obtain a detailed medical/surgical history
 - e. Obtain a detailed history of intimate partner violence (IPV) if applicable, including Danger Assessment
 - f. If community-based advocacy is appropriate based on patient history, as is available, introduce advocate to patient in order to connect the patient to on-going support
 - g. Conduct a complete physical exam with a detailed strangulation assessment
 - h. Obtain photographs per policy
 - i. Document complete examination using the written word and body maps/diagrams
 - j. Collect forensic/evidentiary specimens if the patient elects to do so (evidence may be collected up to 120 hours post strangulation)
 - k. Provide referrals for other services if applicable, including counseling and follow-up care
 - l. Call appropriate law enforcement agency as outlined by reporting requirements or patient preference
 - m. Package, store and transfer evidentiary specimens to law enforcement per policy
 - i. In the event law enforcement is unable to retrieve the evidence immediately after the exam, evidence may be locked in designated storage lockers following chain of custody, and retrieved by law enforcement at a later time.
 - n. Medical records, including photographs obtained during the exam will be stored and released according to facility policy
6. If the patient reports or the FNE observes any of the following during the history-taking and exam, FNE will notify the ED provider
- a. Patient reports history of loss of consciousness
 - b. Patient has a decreased level of consciousness, disorientation, or another neurological deficit

- c. Patient has evidence of trauma or bodily injury that requires intervention
- d. FNE has concerns regarding the medical needs of the patient

References:

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APPENDIX B – STRANGULATION ASSESSMENT TOOL

[Download](#) a MS Word version of this policy.

Patient Information Name
Date of Birth
Record Number
Per Facility Guidelines

STRANGULATION ASSESSMENT TOOL

Date of Strangulation:		Time of Strangulation:	
Number of times strangled:			
History (in patient's own words):			
Method/Manner of Strangulation:	<input type="checkbox"/> One hand <input type="checkbox"/> Two hands <input type="checkbox"/> Chokehold <input type="checkbox"/> Approached from behind <input type="checkbox"/> Approached from the front	<input type="checkbox"/> Ligature used <input type="checkbox"/> Multiple strangulation attempts <input type="checkbox"/> Jewelry on suspect's hand/wrist <input type="checkbox"/> Jewelry on patient's neck during strangulation <input type="checkbox"/> Other (comment)	
During strangulation, did the patient note any of the following?	<input type="checkbox"/> Loss of consciousness <input type="checkbox"/> Incontinence of stool <input type="checkbox"/> Being shaken <input type="checkbox"/> Feet were lifted off the ground	<input type="checkbox"/> Incontinence of urine <input type="checkbox"/> Bleeding (comment) <input type="checkbox"/> Smothered in addition to being strangled With what? _____	
Since the strangulation has the patient noted any of the following symptoms?	<input type="checkbox"/> Coughing <input type="checkbox"/> Dysphagia <input type="checkbox"/> Lightheadedness <input type="checkbox"/> Nose Pain <input type="checkbox"/> Sore Throat <input type="checkbox"/> Combativeness/irritability/restlessness <input type="checkbox"/> Loss of Memory (comment)	<input type="checkbox"/> Drooling <input type="checkbox"/> Odynophagia <input type="checkbox"/> Neck Pain <input type="checkbox"/> Nausea <input type="checkbox"/> Crepitus/subcutaneous emphysema <input type="checkbox"/> Voice changes (comment) <input type="checkbox"/> Bleeding (comment)	<input type="checkbox"/> Dyspnea <input type="checkbox"/> Headache <input type="checkbox"/> Neck Swelling <input type="checkbox"/> Vomiting <input type="checkbox"/> Uncontrolled shaking <input type="checkbox"/> Vision changes (comment) <input type="checkbox"/> Weakness/numbness of extremities (comment)

Glascow Coma Scale

(Circle the appropriate score for each, complete the total at the bottom)

Eye Opening	Score
Spontaneous	4
To speech	3
To pain	2
None	1

Verbal Response	Score
Oriented	5
Confused	4
Inappropriate	3
Incomprehensible	2
None	1

Motor Response	Score
Obeys Commands	6
Localizes to pain	5
Withdraws from pain	4
Flexion to pain (decorticate)	3
Extension to pain (decerebrate)	2
None	1

Total Score	
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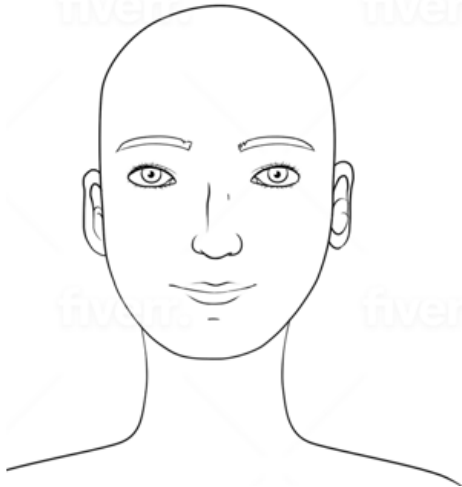
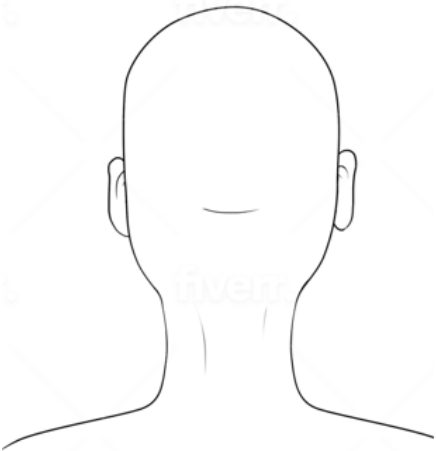
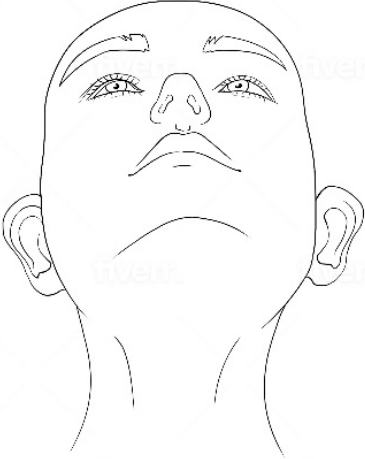
Respiratory Assessment	O2 Saturation: Time:___ Level:___ Time:___ Level:___	Lung Sounds:	
Cardiac Assessment	Heart Rate: Time:___ Rate:___ Time:___ Rate:___	Heart sounds:	Abnormal carotid pulse: <input type="checkbox"/> Yes (describe) <input type="checkbox"/> No
Neurologic findings:	<input type="checkbox"/> Ptosis <input type="checkbox"/> Paralysis <input type="checkbox"/> Facial Droop <input type="checkbox"/> Loss of sensation <input type="checkbox"/> Unilateral weakness <input type="checkbox"/> Other (describe):		
Petechiae	<input type="checkbox"/> Facial <input type="checkbox"/> External ears <input type="checkbox"/> Ear canal <input type="checkbox"/> Left <input type="checkbox"/> Right <input type="checkbox"/> Eyes <input type="checkbox"/> Conjunctival <input type="checkbox"/> Mouth <input type="checkbox"/> Neck <input type="checkbox"/> Other (describe):		
Other	<input type="checkbox"/> Tongue injury (see diagrams) <input type="checkbox"/> Oral cavity injury (see diagrams) <input type="checkbox"/> Subconjunctival hemorrhage (see diagrams) <input type="checkbox"/> Absence of normal crepitus felt during manipulation of cricoid cartilage <input type="checkbox"/> Visible injury (see diagrams) <input type="checkbox"/> Digital photographs taken		
Patient Pregnancy Status	<input type="checkbox"/> Yes <input type="checkbox"/> No # of weeks ___	Fetal Heart Rate/NST: _____ Fetal Movement: _____	Pregnancy-related symptoms during or since the strangulation:

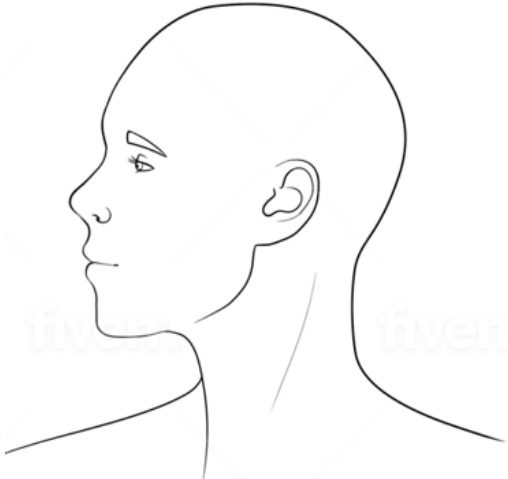
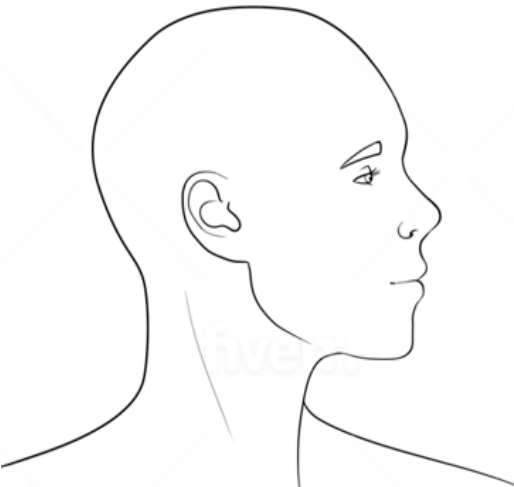
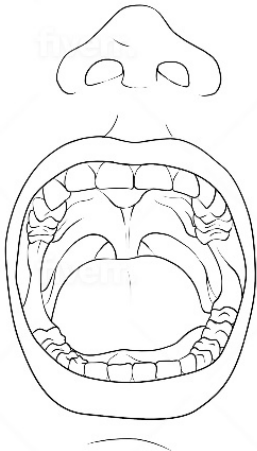
Cranial Nerve Assessment

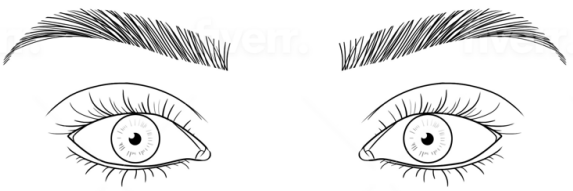
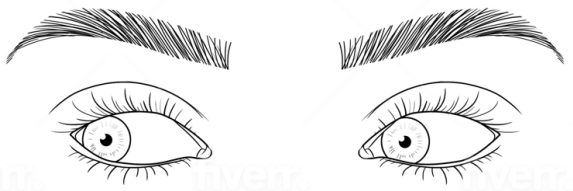
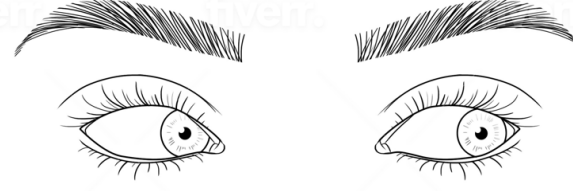
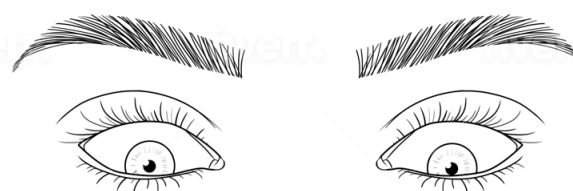

<p>CN I: Olfactory</p> <p>Function: Convey sense of smell.</p>	<p><input type="checkbox"/> Within Defined Limits <input type="checkbox"/> Exceptions to Within Defined Limits</p> <p>Assessment: Test each nostril with substances of known odors.</p> <p>Comments for Exceptions:</p>
<p>CN II: Optic</p> <p>Function: Transmits visual information.</p>	<p><input type="checkbox"/> Within Defined Limits <input type="checkbox"/> Exceptions to Within Defined Limits</p> <p>Assessment: Test visual fields (outer, inner, right, left) of each eye.</p> <p>Comments for Exceptions:</p>
<p>CN III: Oculomotor</p> <p>Function: Coordinates eye movement.</p>	<p><input type="checkbox"/> Within Defined Limits <input type="checkbox"/> Exceptions to Within Defined Limits</p> <p>Assessment: Test the six cardinal positions of gaze.</p> <p>Comments for Exceptions:</p>
<p>CN IV: Trochlear</p> <p>Function: Coordinates eye movement.</p>	<p><input type="checkbox"/> Within Defined Limits <input type="checkbox"/> Exceptions to Within Defined Limits</p> <p>Assessment: Test the six cardinal positions of gaze.</p> <p>Comments for Exceptions:</p>
<p>CN V: Trigeminal</p> <p>Function: Provides sensation to the skin of the face and also controls the muscles of mastication.</p>	<p><input type="checkbox"/> Within Defined Limits <input type="checkbox"/> Exceptions to Within Defined Limits</p> <p>Assessment: Test sensation with a dull object in all areas of the face.</p> <p>Comments for Exceptions:</p>
<p>CN VI: Abducens</p> <p>Function: Coordinates eye movement.</p>	<p><input type="checkbox"/> Within Defined Limits <input type="checkbox"/> Exceptions to Within Defined Limits</p> <p>Assessment: Test the six cardinal positions of gaze.</p> <p>Comments for Exceptions:</p>

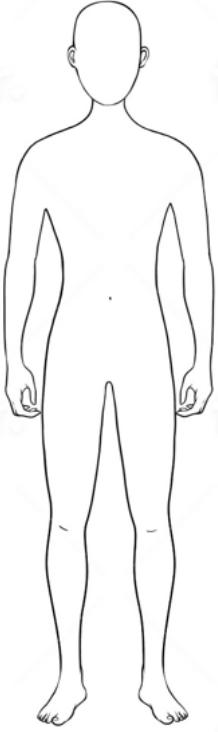
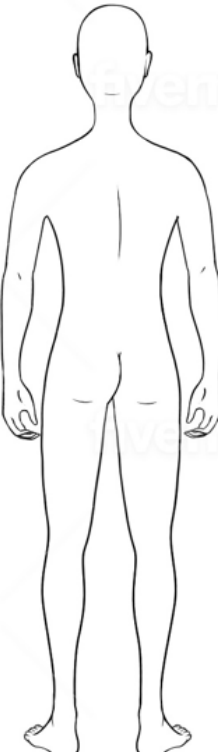
<p>CN VII: Facial</p> <p>Function: Coordinates facial movements and expression</p>	<p><input type="checkbox"/> Within Defined Limits <input type="checkbox"/> Exceptions to Within Defined Limits</p> <p>Assessment: Test facial symmetry with movement (smiling, raise eyebrows, etc.)</p> <p>Comments for Exceptions:</p>
<p>CN VIII: Acoustic</p> <p>Function: Coordinates hearing and balance.</p>	<p><input type="checkbox"/> Within Defined Limits <input type="checkbox"/> Exceptions to Within Defined Limits</p> <p>Assessment: Test hearing by rubbing fingers together by each ear. Assess balance in patient movements; note c/o dizziness.</p> <p>Comments for Exceptions:</p>
<p>CN IX: Glossopharyngeal</p> <p>Function: Provides sensory innervation to the oropharynx and back of the tongue.</p>	<p><input type="checkbox"/> Within Defined Limits <input type="checkbox"/> Exceptions to Within Defined Limits</p> <p>Assessment: Test gag reflex. Asses soft palate and uvula.</p> <p>Comments for Exceptions:</p>
<p>CN X: Vagus</p> <p>Function: Assists in coordinating pharyngeal muscles; serves as the major supply nerve to the recurrent laryngeal nerve.</p>	<p><input type="checkbox"/> Within Defined Limits <input type="checkbox"/> Exceptions to Within Defined Limits</p> <p>Assessment: Test ability to swallow. Listen for voice changes (note c/o voice changes, hoarseness).</p> <p>Comments for Exceptions:</p>
<p>CN XI: Spinal Accessory</p> <p>Function: Coordinates neck and shoulder movements.</p>	<p><input type="checkbox"/> Within Defined Limits <input type="checkbox"/> Exceptions to Within Defined Limits</p> <p>Assessment: Test movements by shrugging shoulders and turn head against resistance.</p> <p>Comments for Exceptions:</p>
<p>CN XII: Hypoglossal</p> <p>Function: Coordinates movement of the tongue</p>	<p><input type="checkbox"/> Within Defined Limits <input type="checkbox"/> Exceptions to Within Defined Limits</p> <p>Assessment: Test tongue symmetry</p> <p>Comments for Exceptions:</p>


Please indicate all injuries that were identified during the assessment on the body diagrams


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APPENDIX C – SAMPLE STRANGULATION PROTOCOL

Status

PolicyStat ID



Implementation

Last Reviewed

Effective

Last Revised

Next Review

Owner Tara Henry,
Nurse Manager

Department Area Forensic Nursing
Services

Applicability

Strangulation Assault, Forensics

Historical Number:

PURPOSE/SCOPE:

To provide the Forensic Nurse Examiner with a guideline for preventing or treating soft tissue swelling of the neck and/or throat after manual or ligature strangulation assault.

PRINCIPLE:

Patients who have experienced manual or ligature strangulation are at risk for soft tissue neck and throat swelling post assault which can lead to a compromised airway. Forensic Nurse Examiners have specialized training in the care of patients who have experienced manual and ligature strangulation assault. All patients presenting to FNSP with a history of strangulation assault will be assessed for emergent and urgent medical complications of strangulation. Patients exhibiting symptoms of soft tissue neck or throat swelling will be treated to prevent worsening of symptoms and airway compromise. Patients who are not exhibiting symptoms of soft tissue neck or throat swelling will be treated prophylactically to decrease risk of airway compromise.

PROCEDURE:

1. Assess patient for **emergent and urgent medical complications** post strangulation
 - a. Initial triage must include a focused history and assessment of:
 - i. Neurological status for signs/symptoms of altered mental status, stroke, and carotid dissection
 - ii. Respiratory status for signs/symptoms airway compromise or respiratory distress
 - iii. Cervical spine for signs/symptoms of fracture or subluxation

- b. If life threatening injury or compromise is present, call 9-911, or instruct someone else at FNSP to activate Emergency Medical Services (EMS)/Paramedics
 - c. If the airway is not patent, or the patient has ineffective respiratory effort, refer to the Adult BLS algorithm.
 - i. Apply oxygen via non-rebreather mask at 15 LPM
 - ii. Perform rescue breathing, if indicated
 - d. If cervical spine fracture suspected, apply C-Collar
 - e. Upon EMS arrival, provide a verbal report and transfer care to EMS personnel.
 - f. Call the Emergency Department of the hospital the patient is being taken to and give report to an Emergency Department Physician or Advanced Practice Provider
 - g. Notify Assistant Clinical Manager of incident as soon as possible after patient has been transferred to EMS and report to Emergency Department has been provided.
 - h. Once the patient is stabilized at the receiving medical facility, the Assistant Clinical Manager or assigned delegate, in collaboration with law enforcement (if involved), will determine when to proceed with the medical-forensic exam.
 - i. Document the incident in the medical forensic record, including:
 - i. Date and time of event
 - ii. Patient's signs and symptoms
 - iii. Physical assessment
 - iv. Nursing interventions
 - v. FNSP staff or interdisciplinary agency personnel involved
 - vi. Transfer of care to EMS
 - vii. Report to Emergency Department
2. If patient is **pregnant**, also follow FNSP Pregnant Patient guideline for evaluation of emergent/ urgent pregnancy related medical needs
 3. If **NO emergent or urgent medical complications are present on initial triage**, patient may remain at FNSP and continue with the medical forensic examination process.
 - a. Monitor patient for changes in signs and symptoms and reassess for emergent and urgent medical complications if indicated. Obtain written and verbal consent from patient to provide treatment
 4. Determine the patient's medication allergies and current medications
 5. Obtain a set of vital signs, including O2 saturation
 - a. Recheck vital signs and O2 saturation if abnormal or there is a change in patient's status
 6. Obtain a strangulation focused medical history that includes, at minimum, the following:
 - a. Method of strangulation act
 - b. Patient and suspects position during the strangulation
 - c. Number of times patient strangled
 - d. Did patient's head impact floor/wall/ground while being strangled
 - e. Was patient's head/neck shaken during the strangulation

- f. Statements made by the suspect during the strangulation
 - g. How did the strangulation act stop
 - h. Was the patient also suffocated
 - i. What was the patient thinking during the strangulation
 - j. Symptoms patient felt **during and immediately after** the strangulation:
 - i. Neurological changes
 - ii. Breathing changes
 - iii. Vision changes
 - iv. Hearing changes
 - v. Voice changes
 - vi. Swallowing changes
 - vii. Pain
 - viii. Other (e.g. pressure in head, incontinence of bowel or bladder)
 - k. Symptoms patient is currently feeling at time of examination
 - i. Neurological changes
 - ii. Breathing changes
 - iii. Vision changes
 - iv. Hearing changes
 - v. Voice changes
 - vi. Swallowing changes
 - vii. Pain
7. Perform a physical assessment of the head, face, and neck for signs of external and internal injury from the strangulation. Physical assessment must include the following:
- a. Neurological assessment including cranial nerves II-VII
 - b. Cervical spine assessment
 - c. Eye assessment including visual acuity with Snellen chart
 - d. Ear assessment including tympanic membranes
 - e. Soft tissue neck/throat assessment for tenderness, subcutaneous emphysema, or crepitus
 - f. Skin assessment for visible external injuries
 - g. Cardiac and lung assessment with stethoscope
8. If **neck pain or tenderness, difficult or painful swallowing, hoarse voice, or difficulty speaking ARE PRESENT, or if patient REPORTS sensation of soft tissue neck swelling** and not allergic:
- a. Administer Dexamethasone 10mg intramuscularly (IM) as a single dose AND Ketorolac 30mg intramuscularly (IM) as a single dose AND Acetaminophen 975mg orally as a single dose

- i. If patient declines IM injections:
 1. Discuss patient's concerns with IM injection
 2. Provide further education on the purpose of IM medication administration

If, after further education, the patient continues to decline IM injections, the Forensic Nurse Examiner may administer the Dexamethasone 10mg intramuscular fluid orally as a single dose AND Ibuprofen 800mg orally as a single dose AND Acetaminophen 975mg orally as a single dose
 - b. Patient may remain at FNSP for the medical forensic examination if life threatening injury or compromise (refer to 1a-f & 2) are not present.
9. If **neck pain or tenderness, difficult or painful swallowing, hoarse voice, and difficulty speaking are NOT PRESENT, the patient DENIES sensation of soft tissue neck swelling, AND the strangulation assault occurred LESS THAN 24 HOURS prior to exam**, provide prophylactic treatment to prevent soft tissue neck or throat swelling and decrease risk of airway compromise.
- a. Administer Dexamethasone 10mg intramuscularly (IM) as a single dose, if not allergic
 - i. If patient declines IM injections:
 1. Discuss patient's concerns with IM injection
 2. Provide further education on the purpose of IM medication administration
 3. If, after further education, the patient continues to decline IM injection, the Forensic Nurse Examiner may administer the Dexamethasone 10mg intramuscular fluid orally as a single dose
10. If, after assessing patient's current signs and symptoms, the Forensic Nurse Examiner is concerned the patient **currently has a medical complication of strangulation that requires further diagnostic testing BEFORE completing the medical forensic examination**, refer patient to the Emergency Department of their choice.
- a. Treat with Dexamethasone, Ketorolac, and Acetaminophen, if indicated, prior to discharging patient from FNSP to the ED
 - b. The patient may be transported to the ED by law enforcement if medically stable
 - c. Call the Emergency Department of the hospital that the patient is being taken to and give report to an Emergency Department Physician or Advanced Practice Provider
 - d. Once the patient is medically cleared by the receiving medical facility, the Forensic Nurse Examiner may proceed with the medical forensic examination.
11. If the patient is **medically stable and does NOT require further diagnostic testing BEFORE completing the medical forensic examination**, the patient may remain at FNSP and continue with medical forensic examination process.
- a. Treat with Dexamethasone, Ketorolac, and Acetaminophen, if indicated
 - b. Monitor patient for changes in signs and symptoms and reassess for evolving medical complications if indicated.

12. Document strangulation history and assessment on FNSP medical forensic examination chart forms.
13. Photograph head, neck, and facial findings according to FNSP Forensic Photography guideline
14. Discharge instructions must include written and verbal instructions for the patient to **follow up in the Emergency Department of their choice if they have any worsening of current signs/ symptoms or new signs/symptoms of neurological, respiratory, or soft tissue neck conditions.**
15. Schedule the patient to return to FNSP in 48 hours for a Follow-Up Examination to re-evaluate and document evolving and/or resolving signs and symptoms of strangulation.
16. Referrals to follow up with Otolaryngology, Ophthalmology, Neurology, or other medical specialists will be made on a case-by-case basis depending the signs and symptoms patient is experiencing post strangulation.

CROSS REFERENCES:

1. FNSP Cardiac/Pulmonary Arrest Guideline
2. FNSP Pregnant Patient Guideline
3. FNSP Forensic Photography Guideline
4. FNSP Pain Management Guideline

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2. Nursing 2022 Drug Handbook 42 ed. Lippincott Williams & Wilkins. Philadelphia

APPENDIX D – SAMPLE HISTORY-TAKING QUESTIONS FOR THE ADULT/ADOLESCENT PATIENT

[Download](#) a MS Word version of these questions.

EXAMPLE QUESTIONS FOR THE ADULT/ADOLESCENT PATIENT

METHOD/MANNER OF STRANGULATION

- How many hands were used? One, two? Were you placed in a chokehold? Was there a combination of these?
- Were you approached from the front, behind, or side? Was there combination of approaches?
- How many times were you strangled?
- Were you smothered in addition to the strangulation?
- Was a ligature used to strangle you?
- Were you wearing any jewelry around your neck at the time? Was the suspect (or insert name) wearing any jewelry on their hands or wrists?
- Were you lifted off the ground or suspended by your neck?

DURING THE STRANGULATION

- Did you have difficulty breathing?
- Did you have difficulty swallowing?
- Did you feel any increased pressure in your head or eyes?
- Did you feel any pain in your neck or throat?
- Were you able to talk? If so, did you have any difficulty? Did your voice sound normal?
- Did you have any changes to your vision (seeing spots, tunnel vision, blurry vision, everything going black, etc.)?
- Did you have any changes to your hearing (roaring, ringing, etc.)?
- Did you become dizzy or lightheaded?
- Did you bite your tongue or the inside of your mouth?
- Did you lose consciousness (passed out, blacked out, etc.)?
- Did you experience any mental status changes (restlessness, combativeness, amnesia, psychosis, etc.)?

- Did you lose control of urine or stool?
- Is there anything else you want to tell me about?

IMMEDIATELY AFTER THE STRANGULATION

- Did you have a cough?
- Did you have trouble swallowing?
- Did you have a sore throat?
- Did you have any changes to your voice (hoarseness, raspy, or complete loss)?
- Did you have any changes to your vision (seeing spots, tunnel vision, blurry vision, everything going black, etc.)?
- Did you have any changes to your hearing (roaring, ringing, diminishment, etc.)?
- Did you have any changes to your breathing (difficulty or inability to breathe)?
- Did you become dizzy or lightheaded?
- Did you lose consciousness?
- Did you experience any mental status changes (restlessness, combativeness, amnesia, psychosis, etc.)?
- Did you vomit? If so, how many times?
- Did you have any neck pain?
- Did you have a headache?
- Did you have any weakness/numbness/paralysis of any of your extremities?

If the patient is pregnant:

- Did you have any abdominal cramping/pain, vaginal discharge, or bleeding?
- Did the baby move as they normally do?

AT THE TIME OF THE EXAM

- Do you have a cough?
- Do you have a sore throat?
- Are you having trouble swallowing, or does it hurt to swallow?
- Do you have any changes to your voice (hoarseness, raspy, or complete loss)?
- Do you have any changes to your vision (seeing spots, tunnel vision, blurry vision, everything going black, etc.)?
- Do you have any changes to your hearing (roaring, ringing, diminishment, etc.)?

- Do you have any changes to your breathing (difficulty or inability to breathe)?
- Are you dizzy or lightheaded?
- Do you have a headache?
- Did you have any neck pain?
- Did you have any weakness/numbness/paralysis of any of your extremities?

If the patient is pregnant:

- Are you having any abdominal cramping/pain, vaginal discharge, or bleeding?
- Is the baby moving normally?

APPENDIX E - SAMPLE HISTORY-TAKING QUESTIONS FOR THE PEDIATRIC PATIENT

[Download](#) a MS Word version of these questions.

EXAMPLE QUESTIONS FOR THE PEDIATRIC PATIENT

Typically, children four years old and under don't have the cognitive development necessary to answer the questions in this example tool. Even once the child reaches 5 years and higher, some of the questions below may not be developmentally appropriate. It is critical that the forensic nurse be able to assess patient development in relation to the appropriateness of the question examples shown here.

Modify the questions below to meet the developmental level of the child, including:

- 1) Tell me about what you felt while the strangulation (**use patient's terminology**) was happening;
- 2) Tell me about what you felt right after the strangulation (**use patient's terminology**); and
- 3) Tell me about how you feel right now (today), documenting patient's words/descriptions.

METHOD/MANNER OF STRANGULATION

- How many hands were used? One, two? Did (insert name or relation to child) put their arm around your neck? Was anything else put around your neck (assessing for use of a ligature)?
- Was (insert name or relation to child) in front of you, behind you, or on the side of you?
- How many times did this happen?
- Did your mouth get covered?
- Were you wearing a necklace around your neck when this happened? Was (insert name or relation to child) wearing any jewelry on their hands or wrists?
- Were you lifted off the ground by your neck?

DURING THE STRANGULATION

- How was your breathing when this was happening?
- How was your swallowing when this was happening?
- How did your head feel when this was happening?
- How did your eyes feel when this was happening?

- How did your neck feel when this was happening?
- How did your throat feel when this was happening?
- Could you/how did it sound when you talked when this was happening?
- Could you/how did you see when this was happening?
- Could you/how did you hear when this was happening?
- How did your ears feel when this was happening?
- Did you fall asleep or feel sleepy when this was happening?
- Did you go potty or pee/poop in your pants (use patient's terminology) when this was happening?
- Is there anything else you want to tell me about?

IMMEDIATELY AFTER THE STRANGULATION

- Right after this happened, did you have a cough?
- Right after this happened, tell me how it felt when you swallowed.
- Did you have a sore throat right after this happened?
- Tell me how it felt/sounded when you talked.
- Were you able to see okay right after this happened?
- Could you hear okay right after this happened?
- Tell me how your breathing felt right after this happened. How did your head feel right after this happened?
- Did you fall asleep/faint/pass out right after this happened? (use age-appropriate terminology)?
- Right after this happened, did you vomit/throw up? If so, how many times?
- How did your neck feel right after this happened? Right after this happened, did you have a headache?
- How did your arms and legs feel right after this happened?
- If able, ask caregiver/person accompanying child about any mental status changes (restlessness, combativeness, amnesia, psychosis, etc.).

AT THE TIME OF THE EXAM

- Do you have a cough?
- Do you have a sore throat?
- Tell me about how it feels when you swallow. Are you having trouble swallowing, or does it hurt to swallow?

- Tell me about how it feels/sounds when you talk.
- Can you see everything okay?
- Can you hear like you always do?
- How does your breathing feel?
- Are you dizzy or lightheaded?
- How does your head feel?
- How does your neck feel?
- How do your arms and legs feel?

APPENDIX F – SAMPLE DISCHARGE INSTRUCTIONS

[Download](#) a MS Word version of these discharge instructions.

Patient Information
Name
Date of Birth
Record Number
Per Facility Guidelines

DISCHARGE INSTRUCTIONS

_____ was examined and treated for strangulation today by _____.

Phone number _____.

The responding law enforcement agency/officer was _____, and your case number is _____. Phone number _____.

You consented to the collection of evidence. Your nurse will not get the results of evidence analysis, so you will need to follow up with the law enforcement agency listed above.

The responding advocacy agency/advocates was _____.

Phone number _____.

Strangulation causes a lack of oxygen because it closes the blood vessels in the neck and/or the airway. Health complications can appear immediately or may develop a few days after a strangulation event. Please call 911 or go to the nearest emergency department if you notice any of the following:

- Problems breathing
- Difficulty breathing while lying down
- Shortness of breath
- Persistent cough
- Coughing up blood
- Loss of consciousness or “passing out”
- Changes in your voice
- Left- or right-sided weakness, numbness, or tingling
- Difficulty speaking
- Difficulty swallowing, a lump in your throat, or muscle spasms in your throat or neck
- Swelling to your throat, neck, or tongue
- Behavioral changes, memory loss, or confusion
- Increasing neck pain
- Drooping eyelid

- Difficulty speaking or understanding speech
- Difficulty walking or sudden loss of balance or coordination
- Sudden confusion or decrease in level of consciousness
- Increasing or severe headache not relieved by pain medication
- Dizziness, lightheadedness or changes in your vision
- Pinpoint red or purple dots on your face or neck, or burst blood vessels in your eye
- Seizures
- Thoughts of harming yourself or others

If you are pregnant, report the strangulation and any of the following symptoms to your doctor immediately:

- Decreased movement of the baby
- Vaginal spotting or bleeding
- Abdominal pain
- Contractions

Follow-up Recommendations

Please return to the Emergency Department/Forensic Nurse Examiner Program on _____ for a follow-up examination.

Please follow up with the advocacy agency above for safety planning and additional resources.

Please contact the law enforcement agency above for questions or concerns regarding your legal case.

Forensic Nurse: _____ Phone: _____

APPENDIX G – COMPREHENSIVE BIBLIOGRAPHY

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