

## SCHOOL HEALTH HANDBOOK

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## INFORMATION FOR HEALTH OFFICE STAFF

The general term “procedures” refers to cares or activities necessary to maintain and promote the student’s health while at school and includes standard emergency response procedures. Such procedures may include but are not limited to: assisted medication administration particularly in the event of emergency and including injection (according to NDE Rule 59), routines as indicated and tests with documentation of result, and skilled nursing procedures including tube feeding, catheterization and cares for students requiring assisted ventilation.

Individual procedure requests are accompanied by consent in writing from the parent/guardian, with medical authorization for cares at school by a licensed prescriber. The parent/guardian provides the school nurse with a complete description of the procedure, and all necessary supplies, including replacements as needed.

Care providers who are not district employees may be permitted to provide cares in school at the discretion of parents/guardians. Such individuals must be consented or authorized by the parent/guardian in writing, medical authorization must be provided, and the parent/guardian assumes responsibility for the cares givers and subsequent cares.

Questions about cares or procedures will be directed at any time to the school nurse or the health services coordinator.

### **School Nurse Responsibilities include:**

- Consult with student’s family and medical provider.
- Develop the universal nursing care plans and individualized health care plans (IHP) at school including identification of necessary procedures to maintain and promote the student’s health and cares during the school day,
- Assess whether or not nursing interventions required by the student can be delegated.
  - Determine if the nursing intervention is complex or non-complex,
  - Determine if the nursing intervention falls within the ability of and willingness of the Unlicensed Assistive Personnel (UAP) (or in some cases, may be the classroom teacher or coach), and carry out training with supervision accordingly,
  - Determine if the student is willing and able to cooperate with necessary nursing interventions,
  - Determine competency of the UAP,
  - Determine if all equipment, medications, etc. are available to carry out the nursing interventions,
  - Monitor and train UAP as is appropriate,
  - Determine if a change of location will alter the method in which the nursing intervention will be delivered such as on a Field Trip.
- Assign nursing interventions as appropriate to licensed health care providers.
- Assure communication between parent, student, school nurse, unlicensed assistive personnel, Administrator, etc. in order to provide optimal cares to promote student’s ability to learn and participate in classroom activities.

**Resources for the school nurse:**

- School Nursing A comprehensive Text (2013) by Janice Selekman DNSc, RN, NCSN, FNASN, E.A. Davis Publisher
- School Nurse Resource Manual A Guide to Practice (2010), School Health Alert Publisher
- Managing Chronic Health Needs in Child Care and Schools (2010) by Elaine A. Donoghue, MD, FAAP and Colleen A. Kraft MD, FAAP, American Academy of Pediatrics Publisher
- Contact the Nebraska State School Nurse Consultant at 402 471-1373 for school health questions or go to the School Health Program website at [www.dhhs.ne.gov/schoolhealth](http://www.dhhs.ne.gov/schoolhealth)

## ASSESSMENT OF POSSIBLE DRUG OR ALCOHOL USE OR INTOXICATION IN THE SCHOOL SETTING

### I. Personnel

- Licensed Nurse

### II. Definition/Purpose

The role of the nurse in assessing a student for possible signs of drug or alcohol use or intoxication is not diagnostic. The intent of the assessment is to evaluate whether impairment may exist and whether a medical emergency may exist, and to provide objective physiological measurement in addition to whatever evidence or concerns that may have prompted the suspicion on the part of school personnel that the student may be “under the influence”. The only conclusive determination of whether the student is actually under the influence of any substance can only be made through laboratory analysis.

This guideline is intended to assist the nurse in making objective determination whether the following parameters are within or outside normal limits: blood pressure, pulse, respirations, level of consciousness (responds to verbal stimulation, responds to touch, responds to painful stimulation, does not respond), orientation, pupil size and reactivity, skin color and temperature, speech, balance, gait and short-term recall. Odors, if detected, may be included in the assessment documentation.

When conducting the assessment, the first priority is to determine whether the student or affected individual is in need of immediate medical intervention. The safety of the nurse and others in the health office environment is also considered. The guideline also emphasizes the role of the building administrator or designee in determining disciplinary actions and/or notification of law enforcement. Unless the need for medical attention is imminent, communication with the parent in matters of suspected drug or alcohol use is referred to the administrator. It is, however, the nurse’s responsibility to confirm that such communication has or will take place. Additional interventions may include a referral to SCIP (School Community Improvement Process).

### III. General Information

The specific effects of alcohol use or illicit substance use are beyond the scope of this guideline. The utility of such information may be impacted by combinations of product use.

In general, the goal of nursing assessment is to identify objectively measured deviations from expected normal responses or measurements in the following areas: vital signs (blood pressure, pulse rhythm and rate, respiratory rhythm and rate), changes in level of consciousness, responsiveness, orientation, balance, speech patterns and cognitive processes.

*Changes in level of consciousness, rapid changes in condition indicating possible medical instability, or changes in breathing patterns indicating possible loss of airway will be considered medical emergencies and emergency medical personnel (911) will be summoned to the scene at once.*

Individual building administrators may create building-specific processes for school personnel (or students) to report students possibly under the influence of drugs or alcohol. Unless the student is in the health office for assessment specifically by administrator referral, the nurse will contact the building administrator to assure building procedures are being followed.

#### **IV. Potential Complications and Suggestions Actions**

When a staff member calls the health office with concerns about a student and sends them to the health office, the individual may try to avoid the situation by leaving the school. Ideally, such students will be escorted to the health office by one or more persons.

In the event that a search of the student is to be conducted, administrative personnel designated by the building principal, or law enforcement personnel, will conduct the search. Collection of evidence regarding drug use or possession is beyond the scope of nursing assessment described in this procedure.

Nurses are expected to keep the student under observation while the student is in the health office in order to form the assessment and note short-term changes in the condition of the student. Rapid changes in the condition of the student may indicate a strong potential for medical emergency and summoning 911 is recommended.

If the student becomes uncooperative or potentially violent at any time, refer to the administrator immediately for your safety and the safety of others in the health office or immediate area.

#### **V. Special Considerations**

When a student presents or is presented for nursing assessment, the nurse will determine why the student is there. The referring party will be asked to specify the nature of their suspicions including known or suspected ingestion, observations or the student, reactions of the student, etc. The referring party will be identified in the documentation by the nurse.

The nurse conducting the assessment is responsible for identifying who will notify the parent that the assessment has occurred or is requested. The party responsible for notifying the parent (determined by the building administrator) will be indicated in the nurse's documentation.

While the student's personal dignity and privacy are still respected to the extent possible, an administrator or designee will be encouraged to be present for the

assessment for the nurse's safety and assurance that the student is afforded due process according to district procedures.

## **VI. Documentation**

Thorough documentation of the assessment is made on Student Health Record. A written copy of the assessment documentation is provided to the administrator on request.

The documentation of assessment becomes part of the student health record and, as such, part of the child's academic record. Parents as well as other school personnel with legitimate educational interest in the student are entitled to access the record upon request.

### **Resources:**

- Drug Testing in Schools; NASN Position Statement (2013). Available at <http://www.nasn.org/PolicyAdvocacy/PositionPapersandReports/NASNPositionStatementsFullView/tabid/462/smId/824/ArticleID/568/Default.aspx>

## ASSESSMENT OF POSSIBLE DRUG OR ALCOHOL USE OR INTOXICATION IN THE SCHOOL SETTING

Essential Steps	Key Points and Precautions
Determine why the student is presenting/presented for assessment.	Route of administration (ingestion, inhalation, injection) may impact rate or sequence of appearance of effects. Knowledge of suspected drug products informs the nurse of possible objective effects likely to appear.
Immediately assess level of consciousness, orientation, and airway on arrival.	Activate 911 if level of consciousness, airway, or orientation are not intact. Observe and note drowsiness or incoordination.
Ask student to identify self, current teacher, date, and time, and school. Ask the student to follow simple instructions (ex: sit down here, write your name).	Assess orientation and level of cooperation on arrival in health office. Note slurred speech. Provides indication if the student poses any threat to others. Provides baseline for behavior. If nauseous or vomiting, position for airway protection and prevention of aspiration.
Ask the student to reposition to another location in the room.	Observe balance and gait.
<p>Measure vital signs: blood pressure, pulse, respirations and document.</p> <p>If the student shows any signs of impairment, recheck in 5-10 minutes and record.</p>	<p>Establish baseline. Include rhythm as well as rate for pulse and respirations.</p> <p>While assessing vital signs, note odors, reaction to skin touch, skin temp and color.</p> <p>Engage the student in conversation to continuously assess orientation and speech.</p> <p>Document pertinent observations. May record subjective comments by students as such.</p> <p>To provide a thorough assessment and assure the student is medically stable, the student will remain under observation by the nurse for a minimum of 10-15 minutes and a minimum of two series of vital signs checks will be documented.</p>
Observe pupil size and reactivity and record.	
<p>Communicate with administrative team: Determine if student will remain in health office under observation, return to class, or go to administrative location and document accordingly.</p> <p>Determine who will notify the parent/guardian that assessment has occurred and document.</p>	Assure proper disposition of student following assessment. Assure parental notification of the assessment.

## BLOOD PRESSURE READING

### I. Personnel:

- Licensed Nurse
- Unlicensed Assistive Personnel (UAP) who have been determined competent by a licensed health care provider

### II. Definition/Purpose

Identify children with evidence of possible cardiovascular pathology.

Establish baseline blood pressure for students.

### III. General Information:

Students about whom the school nurse or parents/guardians have concerns may be checked at the nurse's discretion. With a physician order, student blood pressure may be monitored on an ongoing basis as indicated.

School nurses may see early onset of manifestations of cardiovascular disease. Familial history of hypertension may be an indicator for increased risk for high blood pressure.

The UAP could be delegated the nursing intervention of performing blood pressure reading when appropriate as determined by the school nurse.

### IV. Potential Complications and Suggested Actions:

The following signs and symptoms may be indicators of high blood pressure: headaches, dizziness, and fatigue, shortness of breath, edema, urinary tract problems, obesity, diabetes or history of heart anomaly or disease.

Students who have acute symptoms will be referred for medical attention and further evaluation, regardless of blood pressure reading.

### V. Special Considerations:

Different sized students require difference sized blood pressure cuffs. Pediatric, "regular" adult and "large" adult cuffs are stocked in the school health office.

Smoking, caffeine, alcohol or drugs (for example, birth control pills, decongestants, or diet pills) may increase the blood pressure. A full bladder, recent strenuous physical activity, and anxiety may produce transient, non-pathological elevations in blood pressure.



## VI. Referral Procedures and Considerations:

The student with an abnormal blood pressure reading will be instructed to sit quietly under observation for 15 minutes, and blood pressure will be rechecked. If appropriate, the student will be encouraged to go to restroom to empty the bladder. Blood pressure that persists in the abnormal range will be referred to the parent for medical evaluation immediately if blood pressure is excessively high. If borderline or moderately elevated, the blood pressure will be rechecked in 3-5 days. Students with abnormally high blood pressure on two or more occasions are referred for medical evaluation.

When blood pressure is consistently elevated over three or more readings, consider other assessments such as child's BMI status, medications, state of hydration, full bladder, recent activity or anxiety/stress.

### Blood Pressure Readings in the 50<sup>th</sup> percentile for boys and girls by age at the 50<sup>th</sup> percentile for height:

Age in years	Systolic/Diastolic for Boys	Systolic/Diastolic for Girls
4	91/52	93/50
6	94/56	96/55
7	96/57	97/57
8	98/58	99/59
9	100/59	100/60
10	100/60	101/61
11	101/61	104/61
12	104/62	106/62
13	106/63	108/62
14	107/64	111/63
15	109/65	113/64
16	110/66	116/64
17	110/66	118/67

Retrieved 12/19/2014 from [http://www.nhlbi.nih.gov/files/docs/guidelines/child\\_tbl.pdf](http://www.nhlbi.nih.gov/files/docs/guidelines/child_tbl.pdf)

## I. Documentation:

The results of blood pressure measurement are documented on the student's health record. Normal results are copied to parents at the nurse's discretion. Dated contacts for follow-up of non-normal results are noted on the student's health record.

## Resources:

- Guidelines for the Nurse in the School Setting; (2010) Illinois Emergency Medical Services for Children. Available at [http://www.luhs.org/depts/emsc/schl\\_man.pdf](http://www.luhs.org/depts/emsc/schl_man.pdf)

## BLOOD PRESSURE SCREENING

ESSENTIAL STEPS	KEY POINTS AND PRECAUTIONS
Assemble necessary equipment: stethoscope, sphygmomanometer, and appropriate size cuff	<p>The student will be seated, and relaxed. The student who is obviously out of breath, rushed, or anxious, will be allowed to sit quietly for a few moments before checking blood pressure. Excessive background noise may make accurate blood pressure measurement difficult.</p> <p>The American Heart Association recommends that the width of the inflatable cuff be approximately two-thirds the length of the upper arm.</p>
Have student sitting with right arm exposed and resting on a supportive surface. The hand will be positioned with the palm up.	Consistency in measuring the same arm will produce more consistent results.
Measure blood pressure: Wrap the deflated cuff around the arm, with the lower border approximately 1" above the ante cubital area (inner aspect of the elbow). Palpate brachial artery. Inflate cuff rapidly until the gauge measures 160mmHg or at least 10mm above the level of the last audible sound. Release pressure at approx. 2mmHg per second. Measurement is recorded as the ratio of the first over the final of the audible Korokoff Sounds at the ante cubital space using the stethoscope.	<p>If a sound is heard immediately on auscultation, completely deflate the cuff and begin again, inflating the cuff to a higher level. If initial reading is elevated, have student rest under observation and recheck in 15 minutes and repeat.</p> <p>Encourage student to use restroom if appropriate. Question use of caffeine, alcohol, or other drugs or medications, including inhalers. Uncross legs, if crossed.</p>
Record result	<p>Normal ranges for blood pressure in 15 year olds are 111/67 to 130/86 for girls, and 114/65 to 136/86 for boys.</p> <p>If elevated, include notation of time of day as well as date and right or left arm used for blood pressure reading in notes.</p>
Initiate rescreening or referral as appropriate	Any student with diastolic reading persisting over 100mgHg after 15 minutes will be referred to the parent for prompt medical evaluation. Students with mild or moderate elevations will be rechecked in 3-5 days.

## BLOOD GLUCOSE MONITORING

### I. Personnel

- Licensed Nurses
- Unlicensed Assistive Personnel (UAP) who have been determined competent by a licensed health care provider with recipient specific written directions for the procedure and to whom the intervention has been delegated by the RN.

### II. Definition/Purpose

The student with diabetes experiences altered carbohydrate metabolism and disturbance of the normal insulin mechanism. As a result such a student may have hyperglycemia (high glucose) or hypoglycemia (low glucose). The purpose of blood glucose monitoring is to help assure the student's blood glucose level remains within a normal range.

Glucometers are devices that measure blood glucose. There are many different types.

Blood glucose monitoring may be performed on a routine basis, or as an aspect of investigating the possible cause of symptoms for the student with diabetes. When a student is apparently compromised, providing a form of glucose may precede monitoring. Treatment (glucose or fast-acting carbohydrates) will not be withheld from the student with symptoms consistent with low blood sugar, while waiting for a blood sugar result.

### III. General Information

The student who requires blood glucose monitoring during the school day will submit a completed parent consent form and written medical authorization for the procedure. Parents/guardians who desire accommodations or alternatives to their child checking blood sugar in the health office (i.e. the student who wishes to test in the classroom or at the locker) will contact the school nurse for individualized health care planning. Parent/guardian is responsible for providing equipment and supplies the student will need as well as medical orders for actions to take in response to the glucose reading. Unless otherwise planned by the school nurse, all blood glucose monitoring will take place in the school health office.

Normal blood sugar range in a child is **60-100 mg/dl.**

Normal blood sugar range for an adult is **70-105 mg/dl.**

Individuals with diabetes may have individualized target blood sugar goals or ranges. The school nurse is responsible for identifying student-specific goals while developing the student's IHP (individualized health care plan). The parent/guardian working with the student's physician may direct corresponding treatment measures for blood glucose monitoring results. Parent/guardian authorization to direct cares will be in writing from the child's treating medical provider.

#### IV. Potential Complications and Suggested Actions

Inadequate blood drop for a successful test: Warm the hand or site. Massage the finger and hand prior to the poke. Rotate sites on a regular schedule to avoid scarring. Parent/guardian may specify alternate site testing, e.g. forearm.

Machine malfunction:

- Take the strip out and put back in the machine.
- Use a new strip.
- Calibrate or consider an alternate machine.
- If problems, notify parent.

***Never withhold food due to an inability to check blood glucose. When in doubt, offer carbs.***

#### V. Special considerations

Some students or parents/guardians will request the student be allowed to test their blood glucose in a building location other than the health office. Such a plan may be accommodated, but the school nurse is expected to assure that adequate safety precautions are in place for the student with diabetes and the other students and staff members on the premises. Factors the school nurse will want to consider when working on a plan for blood glucose testing in an alternative location include:

- Medical concurrence;
- Administrator concurrence;
- Suitable disposal or protection of used lancets;
- Students will be required to show the blood glucose result to a responsible adult who agrees to check the blood glucose result;
- Student's ability to reliably state the parameters, significance, and appropriate action for high, low, and normal blood glucose.

As blood glucose monitoring technology evolves, students with diabetes have increasing opportunities to obtain blood samples from alternative sites to the finger, for example the forearm. To the extent possible, the parent/guardian request for testing sites will be honored as long as there is a rotation plan in place to reduce the development of scar tissue. In emergency, health services staff may choose finger tip testing for ease of access to the site and reliability of most glucometers with blood samples from this location.

The school nurse will plan for field trips with the parent/guardian and teacher. Teachers may be experienced with blood glucose monitoring and are able to assist or supervise a student. Glucagon and/or glucose sources will be available to the student as ordered. Nurses may provide field trip accompaniment and assist students with blood glucose monitoring or glucagon. Insulin administration requires the services of a licensed nurse, an unlicensed assistive personnel who has received recipient-specific written instructions and whom the school nurse has assessed competency or the parent/guardian.

#### IV. Required Equipment

Glucometer

Test strips appropriate for the instrument and currently dated

Control solution

Sharps disposal

Lancets (and lancet ejector device if individually supplied)

Tissue

#### VI. Documentation

Documentation will be made of every observed or performed blood glucose monitoring test. Even if the student is independent in cares, it is strongly recommended that the student be required to show the monitor result to a responsible adult, in most cases the nurse or UAP who has been delegated this responsibility. Even if the student performs self cares, the health office staff will be responsible for assuring, and documenting, that the student presented at a specific time for self-cares, and the corresponding result. The documentation will clearly show the identity of the health staff observing the student. Treatment, if indicated, will be documented. Reports, including phone calls, to parents or physicians (with parent consent), will be documented on the student health record.

In some locations, the parent or school nurse will request a hand-written procedure log be compiled for easy review. In most situations, the student health record log is sufficient and summary reports can be prepared at parent request.

#### Resources:

- Diabetes Management in the School Setting; NASN (2012). Available at <https://www.nasn.org/PolicyAdvocacy/PositionPapersandReports/NASNPositionStatementsFullView/tabid/462/ArticleId/22/Diabetes-Management-in-the-School-Setting-Adopted-January-2012>
- Diabetes Care in the School and Day Care Setting; American Diabetes Association; (2014). Available at [http://care.diabetesjournals.org/content/34/Supplement\\_1/S70.full](http://care.diabetesjournals.org/content/34/Supplement_1/S70.full)
- Management of Children with Diabetes in the School Setting; American Association of Diabetes Educators; (2012). Available at [https://www.diabeteseducator.org/docs/default-source/legacy-docs/resources/pdf/research/diabetes\\_in\\_the\\_school\\_setting\\_position\\_statement\\_2012.pdf?sfvrsn=2](https://www.diabeteseducator.org/docs/default-source/legacy-docs/resources/pdf/research/diabetes_in_the_school_setting_position_statement_2012.pdf?sfvrsn=2)

## BLOOD GLUCOSE MONITORING

<b>ESSENTIAL STEPS</b>	<b>KEY POINTS AND PRECAUTIONS</b>
Have the student wash hands (do not use hand sanitizer).	Make sure hands are dry. Water could dilute blood and cause a low reading. Alcohol is NOT recommended for site cleansing prior to testing.
Set up the glucometer. Review use or timing of instrument. Place the glucometer strip in the glucometer.	Make sure the strip number on the bottle is correct for the glucometer setting. Calibrate as desired.
Confirm orders, ability of student to perform testing with/without assistance.	
Puncture the finger (or other site).	Massage or milk the finger prior to puncture to assure good blood flow. Rotate sites regularly. Avoid the pad of the finger due to nerve sensitivity. Student may use alternate site testing, such as the forearm, if glucometer tests accurately for such sites.
Properly discard of used lancet.	If student makes a practice of carrying used lancets, assure they are stored safely to avoid inadvertent pokes and not confused with new ones.
Apply drop of blood to edge of strip.	Follow manufacturer instructions for successful tests. Do not smear the drop onto the strip. Most new instruments use very little blood and will signal if the sample is inadequate.
Read and document glucose level.	Complete daily log on Student health record showing blood sugar result for time and date.
Treat any abnormal readings	Follow parent instructions and physician orders as indicated.

## DIAPERING AND TOILETING ASSISTANCE

### I. Personnel

- Unlicensed Assistive Personnel (UAP) to whom the intervention has been delegated by the RN for specific students.

### II. Definition/Purpose

Guidelines for the diapering and provision of toileting assistance to students are intended to address:

- Infection control considerations for the individuals and the health of others
- Safety and dignity considerations of the student
- Safety of the employees

### III. General Information

Diapering and toileting assistance activities are often needed by those with medical needs or developmental delays. Additional personal protective equipment or barriers will be needed by the employee. In addition to gloves, disposable gowns will be worn if there is a possibility of smearing or splashing of body fluids. It is strongly recommended that two employees are always present during diapering or toileting occurrences for students. A toileting plan will be developed by the School Nurse and include any plans for the student to learn self-cares in toileting or diapering.

### VII. Potential Complications

Students who present a high risk of disease transmission through inability to control or contain body fluids may be subject to emergency exclusion or alternative placement by the administration.

### VIII. Special considerations

The learning environment is to be protected for the safety and well-being of the entire school community. Students must be expected to be able to contain body fluids in a fashion appropriate to age and development, personal dignity and medical need. The school nurse will be involved in planning for a student's adapted hygiene needs. Such needs will be addressed in the student's Individual Health Care Plan.

At times, a child may have a delay in learning appropriate toileting skills even though there is no medical reason or development delay as the cause. This may be a sign of social or emotional disturbance or even of child abuse or neglect.

Even if the student performs self-cares, the health office staff will be responsible for assuring that the student is observing hygienic practices of hand washing or use of hand sanitizer before and after diaper change as well as proper disposal of diaper in appropriate covered receptacle. Employee will ensure sanitation of health room surfaces.

**IV. Required Equipment**

Hand washing facility or hand sanitizer

Disposable gloves

Disposable wipes

Diapers as provided by parent/guardian

Changing table or surface that is ergonomically appropriate for school personnel to comfortably and safely perform cares

Clean changing paper on the surface

Medications or skin products as provided by the parent/guardian which meet medication administration requirements

Plastic bag for soiled diaper and disposable wipes

Covered garbage receptacle that is emptied daily

**V. Documentation**

Documentation will be made of every diaper changed. Observe color and consistency of urine and/or stool in the diaper. Note any changes from student's normal urine or stool.



### GUIDELINES FOR DIAPERING

ESSENTIAL STEPS	KEY POINTS AND PRECAUTIONS
Wash Hands Apply Gloves	
Preparing the Environment	<p>The student will be changed on a surface that is ergonomically appropriate for the employee, not on the floor.</p> <p>The surface will afford privacy to the student during the course of cares. Safety considerations may warrant placement of a phone or radio in the room.</p> <p>The changing surface will be covered with clean changing table paper.</p>
Assemble necessary supplies: Wipes for skin care Dry diaper Plastic bag for disposal of soiled materials, arranged for easy placement. Separate bag if needed for soiled clothing to be washed Skin care products as ordered	<p>Medications if used must conform to medication administration guidelines. For more information, see the school nurse.</p> <p>Powders and skin care products are to be used only if consented and provided by the parent/guardian,</p>
Position the child and explain what you are going to do	Two adult employees will be present during the changing procedure.
Remove or arrange clothing sufficiently to allow suitable area for care without unnecessary exposure.	Plan ahead for and designate the changing area.
Remove soiled diaper and place in bag. Remove soiled clothing as needed and bag separately.	
Thoroughly cleanse perineum and buttocks, using fresh wipes as needed. Change gloves as needed.	
Dry skin before placing new diaper.	
Discard changing table paper. Decontaminate surface with product as provided by custodian.	Assure the soiled table surface is not an ongoing source of contamination in the room.
Dispose of soiled materials by double-bagging and tying off plastic.	Place soiled materials in a receptacle that is emptied regularly and often by the custodian.
Assist student as needed with dressing and repositioning as needed.	
Wash and dry hands thoroughly.	
Document cares as ordered.	

## EPI-PEN ADMINISTRATION for Individual Student

### I. Personnel:

- Licensed Nurses
- Unlicensed Assistive Personnel who have been deemed competent by a licensed RN and to whom the nursing intervention has been delegated for a specific student with recipient specific written directions for administration.

### II. Definition/Purpose:

The administration of an Epi-pen is used when symptoms of anaphylaxis or severe asthma are present in a child or adult. Symptoms may include any or many of the following: hives, itching, swelling, vomiting, and throat tightness that leads to difficulty breathing or swallowing, sense of doom, symptoms of shock including pale, clammy skin, red, watery eyes, collapse or seizures.

**This is a critical medical emergency procedure. Call 911.**

### III. General Information:

Epinephrine is produced by the adrenal gland and during times of stress, it is responsible for maintaining blood pressure and cardiac output, keeping airways open and raising blood sugar levels.

This procedure may require a physician order and parental permission if it is for an individual student. Epinephrine auto injectors for an individual student are supplied by the parent/guardian to each health office for use in the event the specific individual student needs an Epinephrine auto injector. NDE Rule 59 and DHHS Chapter 95 govern medication administration in the school setting. If an individual student has an epinephrine auto-injector in the health office, there will be an anaphylaxis care plan, a note for substitute health office staff and this will be on the medical concerns list.

- The stock health office EpiPen ***do not*** go on field trips.
- The individual student's EpiPen does go on field trips with the individual student.

EpiPen acts immediately and lasts only 15-20 minutes.

### IV. Potential Complications and Suggested Action:

Outdated supply: check monthly and replace through health services or the parent if it prescribed for a specific student.

EpiPen not fully discharged into student or withdrawn too quickly – count to 10 after injecting the EpiPen before withdrawing from student.

### V. Special Consideration:

If an EpiPen is used, 911 will be called and follow emergency guidelines.

**VI. Documentation:**

Document in Student Health Record. Include dosage, site given, time given, response and other pertinent information.

**EPI-PEN ADMINISTRATION**

<b>ESSENTIAL STEPS</b>	<b>KEY POINTS AND PRECAUTIONS</b>
Determine if signs of severe life-threatening asthma or anaphylaxis are present. Take the EpiPen and other emergency supplies to the scene.	When in doubt, treat as an anaphylactic reaction. Usually occurs right after a sting, injection of a drug or medication or ingestion of foods such as fish, nuts or milk.
Direct a responsible person to summon 911.	Administration of epinephrine by injection signals a medical emergency. Symptoms abated by epinephrine may reoccur. Ongoing medical monitoring is needed.
Place patient in a position of lying on his/her back with legs elevated. Loosen clothing. Assess breathing and pulse.	
Select appropriate dose Epi-pen®	<50 pounds, use Epi-Pen JR (0.15mg) >50 pounds, use Epi-Pen (0.3mg)
Remove safety cap.	Keep needle end tip pointing down and away from you. Keep fingers and clothes clear of needle end tip of the auto injector.
Place Needle end TIP near OUTER thigh. Firmly place the needle into the outer thigh so that the device is perpendicular (90 degree angle) to the thigh.	May inject through clothes.
Push hard until you feel unit activate.	
Hold in place for 10 seconds, then remove. Massage injection area for several seconds.	If not held in place for 10 seconds, medication may leak out and not be as effective.
Administer other medications as ordered in the student Asthma/Anaphylaxis Action Plan.	
Send Epi-Pen with student per EMS.	
Continue to monitor victim's vital signs and level of consciousness. Provide CPR as needed.	Victim may feel heart pounding – this is normal.
Remain with the victim. Remain calm. Assure parents have been contacted by school personnel. Prepare for transport by EMS.	Avoid moving the victim; calming reduces the distribution of the allergen in the body.
Document actions fully. Notify Administrator.	

## Nebraska Department of Education Rule 59:

### Emergency Response to Life-threatening Asthma or Systemic Allergic Reactions (Anaphylaxis) Protocol

#### I. Personnel:

- Licensed Nurses
- Unlicensed Assistive Personnel who have been trained and deemed competent by a licensed health care professional to carry out the NDE Rule 59 Emergency Response to Life-threatening Asthma or Systemic Allergic Reactions (Anaphylaxis)

#### II. Definition/Purpose:

Team members trained for the Emergency Response to Life-threatening Asthma or Systemic Allergic Reactions (Anaphylaxis) will review it annually – available at <http://www.education.ne.gov/LEGAL/webrulespdf/RULE592006.pdf>

All Accredited Schools, Approved Schools, and Approved Early Childhood Education Programs shall adopt and implement the Emergency Response to Life Threatening Asthma or Systemic Allergic Reactions (Anaphylaxis) Protocol. In addition to adopting the protocol, Accredited Schools, Approved Schools and Early Childhood Education Programs shall procure and maintain the equipment and medication necessary to implement the protocol in each school building while school is in session in the case of any student and/or school staff emergency.

Physician Authorization. Accredited schools, Approved schools, and Approved Early Childhood Education Programs shall obtain a minimum of one signature of a Physician licensed to practice medicine in Nebraska on the bottom of the protocol in Appendix A of this Chapter.

Life threatening asthma consists of an *acute episode of worsening airflow obstruction. Immediate action and monitoring are necessary.* A systemic allergic reaction (anaphylaxis) is a severe response resulting in cardiovascular collapse (shock) after the injection of an antigen (e.g. bee or other insect sting), ingestion of a food or *medication*, or exposure to other allergens, such as animal fur, chemical irritants, pollens or molds, among others. The blood pressure falls, the pulse becomes weak, **AND DEATH CAN OCCUR.** Immediate allergic reactions may require emergency treatment and medications. **This is a critical medical emergency procedure. Call 911.**

#### III. General Information:

##### LIFETHREATENING ASTHMA SYMPTOMS:

Any of these symptoms may occur:

- Chest tightness

- Wheezing
- Severe shortness of breath
- Retractions (chest or neck “sucked in”)
- Cyanosis (lips and nail beds exhibit a grayish or bluish color)
- Change in mental status, such as agitation, anxiety, or lethargy
- A hunched over position
- Breathlessness causing speech in one to two word phrases or complete inability to speak

#### **ANAPHYLACTIC SYMPTOMS OF BODY SYSTEM:**

Any of the symptoms may occur within seconds. The more immediate the reactions, the more severe the reaction may become. Any of the symptoms present requires several hours of monitoring.

- Skin: warmth, itching, and/or tingling of underarms/groin, flushing, hives
- Abdominal: pain, nausea and vomiting, diarrhea
- Oral/Respiratory: sneezing, swelling of face (lips, mouth, tongue, throat), lump or tightness in the throat, hoarseness, difficulty inhaling, shortness of breath, decrease in peak flow meter reading, wheezing reaction
- Cardiovascular: headache, low blood pressure (shock), lightheadedness, fainting, loss of consciousness, rapid heart rate, ventricular fibrillation (no pulse)
- Mental status: apprehension, anxiety, restlessness, irritability

#### **IV. Emergency Protocol:**

1.	CALL 911
2.	Summon school nurse if available. If not, summon designated trained, nonmedical staff to implement emergency protocol
3.	Check airway patency, breathing, respiratory rate, and pulse
4.	Administer medications (EpiPen and albuterol) per standing order
5.	Determine cause as quickly as possible
6.	Monitor vital signs (pulse, respiration, etc.)
7.	Contact parents immediately and physician as soon as possible
8.	Any individual treated for symptoms with epinephrine at school will be transferred to medical facility

**V. STANDING ORDERS FOR RESPONSE TO LIFETHREATENING ASTHMA OR ANAPHYLAXIS:**

- Administer an IM EpiPen Jr. for a child less than 50 pounds
- Administer an IM adult EpiPen for any individual over 50 pounds
- Follow with nebulized albuterol (premixed) while awaiting EMS. Repeat nebulized Albuterol treatment, back to back
- Administer CPR, if indicated

Parental and/or Guardian Objections to Protocol. The requirements of this Chapter do not preclude Accredited Schools, Approved Schools, and Approved Early Childhood Education Programs from complying with a request from a parent or guardian that a minor student not receive emergency treatment under the protocol. A school district's decision to withhold emergency treatment in such circumstances is not governed by this Chapter.

## FEEDING or MEDICATION ADMINISTRATION PER GASTROSTOMY

### I. Personnel

- Licensed Nurse
- Unlicensed Assistive Personnel (UAP) who has met competency as assessed by a licensed health care professional with recipient specific written directions for the procedure and as delegated by the RN.

### II. Definition/Purpose

A gastrostomy is the surgical creation of a gastric fistula through the abdominal wall for the purpose of introducing food into the stomach while bypassing the mouth and esophagus.

This procedure describes the technique and considerations for providing nutrition, fluids and/or medications through the gastrostomy. Related methods include introducing nutrition or fluids through a nasogastric tube, jejunostomy, or PEG (percutaneous endoscopic gastrostomy).

Most students receiving nutrition or fluids in this fashion while at school are provided intermittent, bolus feedings. Nutrition and fluids may also be provided continuously at a slow rate, utilizing a pump device to control the rate of flow.

### III. General Information

Gastrostomy feedings at school will require parental consent. Medical authorization for the procedure will also be required. The parent will provide all equipment for the procedure as well as the nutritional products used as food and any medication the child will receive through this route. UAP will need to have recipient-specific written instructions as well as show competency to use this route for medication administration. Single use disposable gloves may be used from school supplies. It is very helpful to have a small, washable basket or basin in which to store and transport supplies to the location where the feeding is to be delivered.

If medications are to be administered per the gastrostomy feeding tube, they will be received by the school in the original labeled container, and require parental consent as required by NDE Rule 59 and DHHS Chapter 95 medication administration guidelines. Parents may provide pre-mixed nutritional formula products as ordered by the physician, but medications must be provided separately and will be added to the feedings as ordered.

Feeding tubes may be washed, dried and stored for reuse at parent request. However, parent/guardian will be encouraged to provide new feeding tubes monthly or more often if deterioration is noted.

Oral hygiene will be provided at the time of the tube feeding procedures to prevent dryness and parotitis.

Tube feeding is a clean, non-sterile procedure. Attention to cleanliness and infection control is important. Monitor for signs of infection at the stoma site as infection may warrant additional precautions.

#### **IV. Potential Complications and Suggested Actions**

At every feeding, the skin around the tube will be inspected for signs or irritation or excoriation. The area will be kept clean and dry and free of drainage. Tension or persistent rubbing of the area, for example by wheelchair safety restraints, will be avoided. Signs of wound infection or site irritation will be reported to the parent/guardian or school nurse. Orders for enhanced site cares can be incorporated into the procedure as needed.

Vomiting or aspiration of the food is a potential complication if the esophagus remains patent. The student will be positioned at a 45-degree angle or greater for the feeding and remain upright for a least one hour following the feeding.

In the event of gagging, vomiting, apparent aspiration or compromised airway, the feeding will be stopped immediately. Assessment of the airway and appropriate assistance will be rendered. The parent/guardian, school nurse, and/or emergency medical responders will be summoned as needed.

Spontaneous expulsion of the gastrostomy button does occur. In such an event, the stoma will be covered with an absorbent clean dressing secured in place, and the parent/guardian notified immediately. Gastrostomy buttons or tubes are replaced at school only when written medical orders to do so are received by the school health office. Appropriate instruction is necessary. Only the nurse will replace the gastrostomy tube or button. Placement is confirmed by withdrawing a small amount of stomach contents through the gastrostomy and will be confirmed by the provider.

#### **V. Special Considerations**

Water or formula is incorporated into the tube feeding procedure for the purpose of priming the tubing to prevent introduction of air into the stomach, to suspend crushed medications as needed for administration per tube, to assure the entire contents of the nutritional formula is introduced into the stomach and not left in the length of the tube, and/or to meet the student's requirements for fluids as well as nutrition.

Formula products will be introduced at room temperature. Do not warm in a microwave.

Some parents will request that the tube feeding procedure begin with "venting" or "burping" of air from the gastrostomy prior to initiating food or fluids. Typically this will involve insertion of a clean, dry, empty tube to open a valve if present in the gastrostomy button. Small to moderate returns of gastric contents if present, as well as air, may occur. If ordered, the returns on the venting procedure will be included in documentation of the procedure.



Medication products will be provided in liquid form whenever possible or solid medications will be thoroughly crushed and mixed with water or formula as ordered to prevent occlusion of the feeding tube.

Feeding tubes and bags or syringes used in the feeding will be replaced if the material appears to be breaking down or disintegrating. Feeding tubes will be replaced monthly or more often as needed.

The location of the student for the tube feeding procedure is determined by the parent/guardian preference, with involvement of the school nurse in developing the individualized health care plan. Inclusion of the student with peers is supported. Gastrostomy feedings may be delivered in lunchroom or classroom settings if preferred by the parent/guardian. School administrators and teachers may need to be involved in such planning if this occurs. Similarly, the student's needs and parent/guardian desires for privacy and dignity are also considered. The parent who requests that the procedure is delivered behind screens or in privacy is also supported in this request.

## **VI. Required Equipment**

Gloves

Liquid nutritional formula or products

Water if ordered

60-cc syringe, with plunger removed

Medications in form suitable for administration per tube, if ordered

Towels or drapes

## **V. Documentation**

The school nurse is responsible for determining if documentation is to be written in the form of a daily procedure log, retained in hard copy form in the health office, or on Student Health Manager. In either form, appearance of the site, duration of feeding, quantity and description of nutritional products and water provided, and student condition during and following the procedure will be noted.

### **Resources for Technical Assistance for Students with G-Tube or G-Button**

- Madonna Rehabilitation Hospital  
Nova Adams  
5401 South St.  
Lincoln, NE 68506  
Phone: (402) 413-3000 Toll-Free: (800) 676-5448
- The Gastrostomy Button (G-Button); University of Iowa Children's Hospital. Available at <http://www.uichildrens.org/childrens-content.aspx?id=240083>
- Use and care of a G-Button; University of Iowa Children's Hospital. Available at <http://www.uichildrens.org/childrens-content.aspx?id=240084>
- Gastrostomy Tube (G-Tube) Home Care; Cincinnati Children's. Available at <http://www.cincinnatichildrens.org/health/g/g-tube-care/>

## GASTROSTOMY FEEDING

ESSENTIAL STEPS	KEY POINTS AND PRECAUTIONS
Wash hands thoroughly.	
Review orders on the procedure.  Assemble necessary equipment and supplies.	The location of the student for the tube feeding is determined by the parent/guardian with the school nurse.  Venting of the gastrostomy and/or medication may be ordered to precede introduction of nutritional products. Confirm volume and type of nutritional products and water per physician order.
Assess readiness of student for procedure. Position in upright (45-60 degrees) position if possible.	
Assess gastrostomy site.	Inspect for excoriation, drainage, or signs of infection or deterioration of stoma.
Place towel across the student's chest and abdominal area in such a way to prevent unnecessary exposure while allowing visualization of the site.	Provide a means to protect clothing as well as privacy.
Put on gloves.	
Verify proper placement of the NG tube by auscultating a rush of air over the stomach using a 60 mL syringe or by aspirating gastric content.	
Remove plug or open button. Attach feeding tube and syringe which has been primed by filling the length of the tube with water or formula.	Avoid introduction of air into the stomach
If medications are ordered, they will be introduced prior to the nutritional feeding.	Assure optimal absorption of medication products.
Elevate syringe approximately 10-12 inches over body and allow to flow by gravity.	Timing (duration) of feeding per physician order and parent request. Some fragile students cannot tolerate fast feedings, and the duration of feeding may be ordered for 30 minutes or more. The usual rate of feeding will not exceed 10 ml/minute to prevent nausea or regurgitation. Sometimes students must be given a bolus of the formula, then plug the G-tube and give another bolus 20-30 minutes later or as ordered.
Follow feeding with water if ordered.	Volume of water per physician order to meet student's hydration needs and assure full volume of nutritional product is given.

Monitor student appearance and condition throughout procedure.	Stop feeding immediately in the event of signs of discomfort or distress. Assess student.
Clamp the tube and remove feeding tube from port or gastrostomy button. Replace plug or close button.	
Restore student clothing. Remove towel and equipment and supplies.	
Wash all supplies in warm water with dish washing liquid. Place supplies on clean towel to air dry. Store safely for next use.	A weekly rinse of equal parts vinegar and water will help keep supplies free of residual feeding and contamination.
Wash hands	
Document procedure, including products provided, appearance of site, and condition of student during and following procedure.	

## GLUCAGON ADMINISTRATION

### I. Personnel

- Licensed Nurse
- Unlicensed Assistive Personnel who have been deemed competent according to NDE Rule 59 by a licensed health care professional and with recipient specific written directions for administration and to whom the nursing intervention has been delegated by the RN.

### II. Definition/Purpose

Glucagon will be administered at school for the individual for whom it is prescribed by a licensed medical provider and according to NDE Rule 59 and DHHS Chapter 95 Medication Administration Regulations. It is used by persons with diabetes for the treatment of severe hypoglycemia (low blood glucose) when the person is unable to correct the condition by taking oral sources of glucose. The individual with severely low blood sugar may be unconscious, vomiting, having seizures brought on by the depletion of glucose from the brain, and/or unable to safely chew or swallow without risk of aspiration.

The need for, and the administration of glucagon is a medical emergency. Emergency medical services must be summoned whenever glucagon is administered. Ongoing medical support must be provided to the person with diabetes who receives glucagon in order to assure complete and safe recovery.

Health Staff are encouraged to review and practice the process of glucagon administration at least annually, and more frequently if a new glucagon order is received in the building. The administration of this medication is governed by NDE Rule 59 and DHHS Chapter 95.

### III. General Information

Glucagon is a natural hormone produced by the body. It stimulates the liver to release the stored glucose. It stimulates the liver to release stored glucose. If stores of glucose in the liver are depleted, an injection will not raise the blood sugar.

The procedure of glucagon administration requires a physician order and parent permit.

The glucagon comes in a prepared syringe with diluents and one vial of glucagon powder. The solution, once reconstituted, will be used immediately or discarded. The dose for a child less than 50 pounds is 0.5 ml, or half the contents of the syringe. The dose for a child over 50 pounds or an adult is 1.0 ml, or the entire contents of the syringe.

Glucagon is administered by intravenous, subcutaneous or intramuscular routes. The most commonly used route is subcutaneous, into the loose tissue under the skin and above the muscle mass. Glucagon can be injected in the buttock, arm or thigh.

Patients usually demonstrate signs of recovery 5-20 minutes following injection of glucagon. Carbohydrates will be given as soon as the person is able to safely chew and swallow. Typical side effects of glucagon may include nausea, headaches and weakness. These side effects may persist after the primary effect has occurred; precautions will be taken to prevent aspiration and vomiting following injection.

#### **IV. Potential Complications and Suggested Actions**

There is a risk of vomiting. Place student in side-lying position and provider supervision.

When preparing the injection, care must be taken to assure the powder is completely dissolved in the liquid prior to administration. Glucagon will not be used unless the solution is clear and of a water-like consistency.

When glucagon orders are in place, the expiration date will be monitored to prevent having an outdated supply in emergency.

The glucagon kit (un-reconstituted) may be stored at room temperature. The location of the glucagon kit will be noted for any substitute health office workers.

#### **V. Special considerations**

If glucagon is used, 911 will be called.

Unlike epinephrine auto injectors, glucagon will NOT be given through clothing.

If conscious and able to safely take in oral carbohydrates, provide oral food as per the student's individual plan.

#### **VI. Documentation**

Document on the Student Health Record. Include parental and 911 notification in notes. Specify dosage, the time and location on the body where the injection was given, and student's response.

## GLUCAGON ADMINISTRATION

<b>ESSENTIAL STEPS</b>	<b>KEY POINTS AND PRECAUTIONS</b>
Direct school personnel to call 911 Correctly identify the student as a diabetic with a glucagon order at school.	There is no “standing order” for glucagon administration at school. Every glucagon order is individually made and consented. If a student with diabetes is symptomatic for very low blood sugar, attempt to provide oral carbohydrates, including glucose tabs or gel, as appropriate. If the student is unconscious, vomiting, or otherwise unable to take oral carbs, notify 911 immediately.
Remove the cap from the bottle with the powdered tablet.	
Remove the cap from the syringe.	Keep bare hands away from the needle. The needle is sterile and will remain so for the injection.
Insert the needle into the bottle, and instill the entire liquid contents into the bottle with the powdered tab.	
Remove the syringe from the vial. Carefully place the cap back on the needle to protect sterility.	
Roll the bottle between your hands to dilute the powder contents until the solution is clear to visual inspection.	Do not shake, you do not want bubbles in the mixture.
Uncap the needle on the syringe.  Reinsert the syringe into the bottle and remove the fluid. You have now prepared the injection.	Avoid drawing air into the syringe. If air appears, hold the syringe with needle tip up and expel air by pushing gently on plunger of syringe.
Expose the injection site. Prepare injection site by swabbing with alcohol. Withdraw the full or half dose of liquid as indicated by student age. Insert needle into loose tissue under the skin with a quick, firm, darting motion. Press syringe plunger to inject contents of syringe.	Usual dosage is according to age and will be specified on physician’s order: 0.5ml for child <5 years, or ½ the fluid in syringe 1ml for child >5 years, or entire fluid contents of vial. Giving too large a dose presents little risk of harm to the student.
Position student on their side.	Glucagon can cause vomiting. Position student to protect airway from accidental aspiration.
Continue to supervise student closely until EMS personnel arrive to assume care.	

## INJECTION TECHNIQUE

### I. Personnel:

- Licensed Nurses
- Unlicensed school personnel (UAP) may be trained in administration of injected medications after competency is determined by a licensed health care professional with recipient specific written directions for administration.
- With parental permission *and* school nurse concurrence, students with diabetes may self-inject insulin.

### II. Definition/Purpose:

The purpose of this guideline is to provide a standard reference for subcutaneous and intramuscular injection technique for the purpose of immunization and emergency medication administration.

### III. General Information:

Few medications required at school necessitate injection. As a rule the district does not provide immunization services to students. Routine medication administration involving injection is generally limited to insulin for students with diabetes. Insulin pumps are considered insulin administration devices for the purposes of these guidelines. Epinephrine and glucagon account for the majority of medication administration by injection requests. Such requests, if accepted by the school, must be for necessary emergency treatment of a medical condition.

This district generally declines to receive other medication administration requests for non-emergency medications. For example, intravenous antibiotics are referred to the parent for administration, or the parent consents for non-school personnel to come to the school building to provide cares for the student.

### IV. Potential Complications and Suggested Actions:

Immunizations and medication administration by injection raise the possibility of sudden onset of allergic reaction, or anaphylaxis. Where any injection occurs, the provider will first assess any prior history of allergic reaction which would preclude injection at school. Whether past history of injection has occurred or not, the medical protocol and supplies for emergency response to life-threatening asthma and anaphylaxis will be near at hand.

### V. Special Considerations:

Proper and safe disposal of contaminated sharps including needles is required by the district's exposure control plan.

### VI. Required Equipment:

Sterile syringes and needles

Proper disposal containers for bio-hazardous sharps

Medical order for administration of any product by injection to a student.

**VII. Documentation:**

All products administered to any person are to be documented by the individual administering, on the student health record as appropriate.

<b>How to Use Glucagon:</b>	
1	Flip off the seal from the vial of Glucagon powder.
2	Remove the needle cover from the syringe. <b>DO NOT REMOVE THE PLASTIC CLIP FROM THE SYRINGE</b> , as this may allow the push rod to come out of the syringe.
3	Insert the needle into the rubber stopper on the vial, then inject the entire contents of the syringe into the vial of Glucagon powder
4	Remove the syringe from the vial, then gently swirl the vial until the liquid becomes clear. Glucagon should not be used unless the solution is clear and of a water-like consistency.
5	Insert the same syringe into the vial and slowly withdraw all of the liquid. In children weighing less than 44 pounds, withdraw half the liquid (0.5 mark on the syringe).
6	Cleanse site on buttock, arm or thigh and inject Glucagon immediately after mixing. Inject the Glucagon and then withdraw the needle. Apply gentle pressure against the injection site.
7	<p>Turn the person on his/her side. When an unconscious person awakens, he/she may vomit.</p> <p>Call 911 immediately after administering Glucagon. If the person does not awaken within 15 minutes, you may administer a second dose of Glucagon, if previously instructed by your healthcare provider to do so.</p> <p>As soon as the person is awake and able to swallow, give him/her a fast-acting source of sugar (such as fruit juice) followed by a snack or meal containing both protein and carbohydrates (such as cheese and crackers, or a peanut butter sandwich).</p>
8	Discard any unused reconstituted Glucagon.
Illustrated steps available at <a href="http://www.lillyglucagon.com/important-safety-information">http://www.lillyglucagon.com/important-safety-information</a>	



## INSULIN ADMINISTRATION

According to NDE Rule 59 and DHHS Chapter 95

### I. Personnel:

- Licensed Nurses
- Unlicensed school personnel may be trained in administration of injected medications after competency is determined by a licensed health care professional with recipient specific written directions for administration.
- Students may self-administer insulin when deemed competent to do so by parent and school nurse.

### II. Definition/Purpose

Insulin is a naturally occurring hormone that regulates glucose metabolism which in turn fuels the life support functions of the brain. When too much insulin is in the system, the body is compromised by low blood sugar, potentially in a medical emergency and even fatal. When too little insulin is in the system, the body experiences very high blood sugar, which is very stressful to the body's organs and at times resulting in acute toxicity. The medical function of insulin administration to a child with diabetes is reserved for the student and parent, and the district's licensed nurses.

### III. General Information:

In general, the IHP goals of the student with diabetes are to promote self-sufficiency in management and to develop an appropriate healthy lifestyle. As important as the direct nursing functions are for the student with diabetes, the health promotion and health education functions of the health office staff are also crucial to the student's success at school. The model care plan for diabetes reflects these goals.

Injection Technique is addressed in procedural guidelines by the names of "How to Administer a Subcutaneous (SQ) Injection" and "How to Administer an Intramuscular (IM) Injection" in the Appendix.

The school nurse is responsible for working with the parties concerned to develop an optimal individualized health care plan for the student, and to correctly define for all parties the limits of the role of the health technician and other unlicensed school personnel where insulin administration is concerned.

In assisting students at school with diabetes management, the UAP who has been trained in administration of insulin after competency is determined by a licensed health care professional ***may with the supervision and approval of the school nurse receive the following delegated responsibilities to provide these nursing interventions:***

- Perform or supervise the student performing his or her own blood glucose monitoring using a glucometer, and document on Student Health Record.
- Offer oral carbohydrates in response to low blood glucose, with documentation on Student Health Record.
- Assist the student in checking urine for ketones as indicated when blood sugar is high and document.
- Administer glucagon by subcutaneous injection in the event of severe or life-threatening hypoglycemia.
- Interpret or verify insulin doses on a sliding scale for the student to self-inject.
- Interpret or verify for the student carbohydrate equivalents for the purposes of meal planning and insulin dosage.
- Visually verify the insulin dose the student draws up in a syringe, or indicates by setting on an insulin pen or insulin pump.
- Verify and document the student came into the health office for self cares, including blood glucose, insulin dose, and carbohydrates intake as reported by student.

The UAP ***may NOT under any circumstances:***

- Coach a student on use of the insulin pump when he or she is not independent (a parent/guardian or school nurse is responsible for this).
- Provide cares for the diabetic student without the approval of the school nurse.
- When the licensed nurse is involved in the cares for a diabetic student, it is expected the nurse, not the UAP, will document cares as provided.

#### **IV. Potential Complications and Suggested Actions**

Errors in dose administration can be particularly dangerous. Taking care to check and double-check the physician's order for insulin dose calculation is essential.

It is increasingly common for prescribers to authorize parents to direct insulin doses for the student. Such assignment to parents by the treating physician will be in writing and include reasonable parameters for dosing of insulin both in dose and frequency. Seek input from the prescriber if questions or concerns arise (such communication being permitted per the medication consent form the parent signs). This does not remove the nurse from exercising sound and reasonable judgment.

Parents who are assigned responsibility for the insulin doses their child is to receive on a daily or periodic basis, ideally document their dose instructions in writing. If verbal orders are received from the parent/guardian, they will be received and documented only by a licensed nurse.

#### **V. Special Consideration**

Students who require assistance with insulin administration are provided services by licensed nurses or delegated UAP's while on field trips. Contact the school nurse for assistance in planning field trips.

Generally, students with normal cognitive functioning are developmentally ready to begin assuming responsibilities for their own diabetes management between second and fourth grade. This generalization is also impacted by age at diagnosis, and time since diagnosis. Self-management of diabetes can take place with student taking responsibility for interventions over time as the student achieves competency.

#### **VI. Required Equipment**

All insulin administration supplies are individually-provided by the student family.

Insulin bottles will be dated when opened and may be used up to 30 days before recommending replacement to parent/guardian. No insulin will be used that has exceeded manufacturer's expiration date.

Any student taking insulin will have access to a glucometer as school for check blood glucose. Follow manufacturer's instructions for care, directions and storage. The student will have access to glucose snacks as needed.

#### **VII. Documentation**

All diabetes-related cares are to be documented in a timely fashion. In the event the parent/guardian wishes to provide verbal insulin orders to the licensed nurse, the nurse will send home in a timely fashion a written copy of the order received for the parent to review and sign and return to the school health office for the medication record.

**NOTE:** Specific instructions for specific types of insulin administration devices are per manufacturer instructions.

## **METERED DOSE INHALERS (MDI's) ADMINISTRATION**

as regulated by NDE Rule 59 and DHHS Chapter 95

### **I. Personnel:**

- Licensed Nurses
- Unlicensed school personnel (UAP) after medication administration competency is determined by a licensed health care professional
- Students may self-administer

### **II. Definition/Purpose**

Metered dose inhalers (MDI's) provide a measured dose of medication directly to the airways. Medications may be fast- or long-acting. There are numerous types of inhaler devices, so each is worthy of examination and review of package instructions to assure correct use.

### **III. General Information**

MDI's will be stored in the health office. The school nurse or UAP who has been determined competent will monitor the student's technique and document each use of the MDI along with the reason the MDI is being used (shortness of breath, coughing, wheezing, etc.) A spacer is a device with a mouthpiece or mask at one end and a hole for an inhaler at the other. Spacers can make it easier for medication to reach the lungs, and also mean less medication gets deposited in the mouth and throat, where it can lead to irritation and mild infections.

The student with a completed written authorization from a parent/guardian and medical prescriber may self-manage his/her asthma diagnosis with MDI's. Parents/guardians are encouraged to keep a spare inhaler in the health office in the event the child has forgotten or misplaced the one he/she is to carry for self-management.

### **IV. Potential Complications:**

The goal of inhaler use will be delivery of the entire dose to the airways as prescribed. Careless, too-rapid use of the inhaler, or inadequate inhalation and holding of the breath when the dose is administered may diminish effectiveness of the medication. Students will be supervised and instructed in optimal use of their inhalers as prescribed. Students may benefit from the use of spacer devices, and be provided them if available, at the discretion of the school nurse.

Because the medication product cannot be directly observed, it is difficult to determine if the inhaler is near-empty or empty.

The student who is having symptoms of breathing distress will remain in the health office following inhaler use to assure that relief of symptoms occurs. Student's who fail to receive relief from their inhaler, or whose symptoms rapidly increase in severity may be experiencing a medical emergency and emergency response may be required. Students may also overuse an MDI. Review with the student how frequently the MDI is

used, what technique is used and how many puffs are taken at a time and why the MDI is being used more often than prescribed.

#### V. Special Considerations

Occasionally a student desires to use an inhaler more often than prescribed. Such a need suggests the student's condition may not be stable, and the parent/guardian will be notified. The student will be under supervision of health staff at this time. In general, the student is expected to be allowed use of the inhaler as prescribed. A student whose breathing condition is not stable will be evaluated for signs of an emergency and may be sent home with the parent/guardian at the judgment of the school nurse with instructions to obtain medical clearance to return.

### METERED-DOSE INHALER ADMINISTRATION

Essential Steps	Key Points and Precautions
Verify that it is the appropriate time for the medication, and there is a signed parental consent as well as medical authorization for the medication.	Consult with the school nurse if any of these requirements are not in place.
Observe whether the student shows any signs or complaints of breathing distress prior to inhaler use.	Some students use inhaler routinely or preventatively, as before strenuous physical activity. Other students use inhalers because they have active or acute symptoms and require relief, and many need additional assistance if none is obtained.
Have the student shake the inhaler, and remove cap.	Encourage student to wash hands prior to inhaler use. Store inhaler in clean, dry place. Practice good infection control around the device for the student's protection.
Attach to spacer or holder chamber if available.	The spacer device will "hold" the aerosolized medication to allow the student several breaths to take in the entire dose if needed.
Have student exhale completely.	Inhalation is maximized following complete exhalation and will provide optimal delivery of the medication to the airways.
Observe the student holding inhaler correctly, with mouthpiece directly in mouth with lips.	Incorrect use of the inhaler device will decrease effectiveness of medication delivery.
As student begins to inhale, the inhaler is depressed one time to release dose. The student will inhale deeply and hold the breath for the count of 10 (slowly).	Holding the breath for a short time will enhance delivery of medication.
If no spacer is available, have student hold MDI two finger breaths from lips with	

mouth open. Depress the inhaler to release the dose. Student will inhale deeply and hold breath for 10 seconds	
Have student observe the clock and wait at least one full minute before the second inhalation.	Per product instructions.
Observe and record relief or lack of relief of symptoms, as noted.	
Document medication administration on student's record.	

### Resources:

- “Steps for the Correct Use of Your Metered Dose Inhaler (MDI)” University of Michigan Health Systems (2010). Available at <http://www.med.umich.edu/1info/FHP/practiceguides/asthma/mdi.pdf>
- Inhalers; Cleveland Clinic; (2013). Available at [http://my.clevelandclinic.org/health/medicaldevices/hic\\_How\\_to\\_Use\\_a\\_Metered\\_Dose\\_Inhaler](http://my.clevelandclinic.org/health/medicaldevices/hic_How_to_Use_a_Metered_Dose_Inhaler)
- “Using a Metered-Dose Inhaler (MDI)”; National Jewish Health (2013). Available at <http://www.nationaljewish.org/healthinfo/medications/lung-diseases/devices/metered-dose>

## NEBULIZER THERAPY, INTERMITTENT OR CONTINUOUS

### I. Personnel:

- Licensed Nurses
- Unlicensed school personnel (UAP) after medication administration competency is determined by a licensed health care professional

### II. Definition/Purpose:

Devices that generate aerosolized particles are classified as nebulizers or aerosol generators. An air compressor changes liquid medications, contained in a small chamber, into a fine mist that can be easily inhaled into the airways.

Intermittent nebulizer therapy may be ordered on a routine or episodic basis. Albuterol by nebulizer is included as a step in the NDE Rule 59 Emergency Response to Life-threatening Asthma or Systemic Allergic Reactions (Anaphylaxis) protocol.

Continuous aerosol therapy may be administered to the person with an artificial airway (tracheostomy), in a variety of ways including via mask, tracheostomy collar, or Briggs adapter (T-piece).

The purpose of nebulizer therapy is to aerosolize the medication and improve clearance of airway secretions. Medications may be administered in this fashion topically to the airways. Such medications might include: antibiotics, bronchodilators or vasoconstrictors. The inhaled medication travels to the lungs and reverses the symptoms of asthma and allergies.

### III. General Information:

Many families provide a nebulizer for their child's use at school if needed. Every school building has a nebulizer for use in the event of life-threatening emergency and administration of albuterol per standing medical order. Contact the health services coordinator with questions about nebulizer availability.

The standing medical order, or emergency protocol, in Nebraska schools calls for administration of EpiPen by injection followed by albuterol administered by nebulizer in the event of life-threatening asthma or severe allergy (anaphylaxis). The albuterol provided to the school for the purpose of implementing the protocol is to be used only for this purpose and is not available to students who forgot their asthma medications or cannot afford them but are not experiencing a life-threatening emergency.

### IV. Potential Complications and Suggested Actions:

- Contraindications to nebulizer therapy include:
- Patient history of previous adverse reaction to the medication that is being aerosolized and
- Profound tachycardia.

The patient who is severely short of breath may not be able to effectively take in the aerosol. The aerosol treatment may cause tracheobronchial irritation resulting in bronchospasm. Such a person may be in a medical emergency and 911 will be called if indicated and the NDE Rule 59 Emergency Response to Life-threatening Asthma or Systemic Allergic Reactions (Anaphylaxis) may be indicated.

**V. Special Considerations:**

- Each person will use their own personal tubing and medication supplies. The entire unit will be cleaned and decontaminated after each use.
- For the NDE Rule 59 Emergency Response to Life-threatening Asthma or Systemic Allergic Reactions (Anaphylaxis) – check supplies and equipment on a monthly basis and after each use.

**Required Equipment:**

Working nebulizer that will produce an observable mist when medication or other fluid is in the chamber.

Individual student tubing, medication chamber, mouthpiece or mask, medication

Facilities for washing and storage of chamber and mouthpiece, and other supplies as needed or prescribed.

**VI. Documentation**

Pre and post-treatment breathing assessments and observations, as well as medication administration, are record on the student health record.



## NEBULIZER THERAPY

ESSENTIAL STEPS	KEY POINTS AND PRECAUTIONS
Wash Hands	
Explain procedure to student. The student will be seated in a comfortable, upright position to allow full chest expansion.	
Perform pre-treatment respiratory assessment.	
Confirm medication order and check medication label and dose.	
Connect nebulizer to small bore tubing.	
Turn on the flowmeter of the nebulizer to a flow of 5 liters/min. If the total medication exceeds 3 ml, increase the flowmeter to 7 liters/min.	
Connect the mouthpiece.	
Instruct the student in the proper method of taking a treatment. The method is slow diaphragmatic breathing with an inspiratory hold. The student will be sitting in an upright or semi-upright position if possible.	Tapping the nebulizer chamber during the treatment will ensure nebulization of all the medication.
The aerosol will be nebulized for approximately 10 minutes or until all of the medication is gone.	
Perform post-treatment assessment.	Desirable effects of treatment include improved breath sounds; and decrease in wheezing, stridor, retractions, or dyspnea. The patient will be monitored for adverse reactions such as tachycardia, sudden bronchospasm, nausea and vomiting.
When the treatment is completed, the nebulizer will be dismantled and the mouthpiece rinsed under a strong stream of warm water. The nebulizer will then be allowed to air dry on a paper towel. Once dry, it can be reassembled and stored in a clean, dry plastic storage bag.	
Document treatment, including medication and dose, assessments pre and post treatment, and any adverse reactions to therapy.	

**Resources:**

- “How to use a nebulizer”; Medline Plus (2014). Available at <http://www.nlm.nih.gov/medlineplus/ency/patientinstructions/000006.htm>
- “Using a Nebulizer”; National Jewish Health (2012); Available at <http://www.nationaljewish.org/healthinfo/medications/lung-diseases/devices/nebulizers/instructions/>
- “General Nebulizer Information”; Just Nebulizers; (2014) Available at <http://justnebulizers.com/general-nebulizer-information/>

## OTOSCOPY

### I. Personal

- Licensed Nurse

### II. Definition/Purpose

Otoscopy is the use of an otoscope in examining the ear. .

The purpose of the licensed nurse in the school setting performing Otoscopy is to identify deviations from the normal presentation of the healthy ear canal and tympanic membrane. Foreign objects in the ear can also be identified.

Otoscopic examination is recommended prior to tympanometry screening, but is an optional skill. If school nurse is untrained in otoscopic assessment, then defer.

### III. General Information

The examination of the ear using an otoscope is part of skilled nursing physical assessment. The procedure is not intended to be diagnostic of medical conditions or abnormalities. Instead, the intent is to identify the child with non-normal presentation for referral and further evaluation.

Otoscopy may be indicated under the following circumstances: prior to tympanometry screening, following failed tympanometry or audiometric screening, to assess complaints of ear pain, to assess complaints of possible foreign body in the ear that cannot otherwise be visualized, and/or nursing assessment of the symptomatic child.

The value of otoscopic examination is to identify features or characteristics of the ear that will assist the nurse and parent/guardian in making informed decisions concerning further medical evaluation and treatment.

In preparation to perform otoscopy, a selection of different-sized specula may be helpful. The examiner will select the largest speculum that will comfortably fit in the ear canal in order to provide optimal visualization of structures and landmarks.

### IV. Potential Complications and Suggested Actions

A child who is screaming or crying may show ear canals and tympanic membranes that are red. This effect will disappear when the child calms.

Otoscopic examination of a struggling child may result in discomfort or even injury to the ear. Explain calmly to the child what you are going to do. Many nurses find it helpful to allow the child to handle the otoscope or “examine” the ears of a toy or doll to decrease anxiety about the procedure. The assistance of an adult to position, hold and reassure the child during examination can be very helpful if not essential. If the child is uncooperative, wait till parent is present or refer to the child’s medical provider.

Look for impacted cerumen or foreign objects as you gently place the otoscope into the ear canal.

Avoid putting the otoscope into the ear if the external ear is injured, if there is profuse drainage of any type coming from the ear or a foreign body in the ear canal as it can push any foreign body further into the ear canal.

Caution must be exercised when examining the ear for the presence of a foreign body. Carefully examine the ear and canal for visible objects before inserting the speculum of the otoscope. Care will be taken to not press the foreign body farther into the ear.

Otoscopy, while mildly uncomfortable or “ticklish” to some, will at no time be a painful procedure. Complaints of sudden or severe pain during otoscopy warrant immediate withdrawal of the otoscope. The otoscope speculum will be inserted only far enough to visualize the tympanic membrane. The speculum will at no time touch the tympanic membrane.

#### **V. Special Considerations**

If a child presents with ear pain on one side, it is often helpful to examine the unaffected ear first. This will help identify any presenting changes in the affected ear. Do not force an evaluation if child is resistant. No harm should be caused to the child.

#### **VI. Required Equipment**

Otoscope, fully charged or battery powered  
Disposable specula of various sizes

#### **VII. Documentation**

Appropriate documentation includes unambiguous description of the presence or absence of landmarks on examination. Documentation will clearly reflect findings of the student’s right and left ears. The presence or absence of drainage will be noted. Color of the canal and tympanic membrane stated. The tympanic membrane is further described as flat or bulging as appropriate. Any abnormalities of the external ear are noted as well.

## OTOSCOPY

ESSENTIAL STEPS	KEY POINTS AND PRECAUTIONS
Wash hands.	
Assess readiness and positioning of student. Explain to the student what you are going to do. State that the examination is painless and relatively quick.	Ideally the cooperative student sits in a comfortable upright position. A younger child may be more comfortable sitting on the lap of an adult with the head resting against the adult's chest for stability.
Select a new/clean speculum to fit on the otoscope for the examination. Select the largest size that will comfortably fit into the student's ear canal.	
Position the otoscope so that it is held in one hand with the hand resting lightly against the child's head.	The examiner's hand resting lightly against the child's head while holding the otoscope will keep the otoscope correctly oriented and helps keep the otoscope from being inserted too far into the ear canal.
With the light on, gently guide the speculum into the ear canal.	Do not insert the speculum past the point of comfort for any reason.
Children age 3 years and younger: Gently pull the pinna back and down for maximum viewing of the tympanic membrane.	
Locate visual landmarks. Observe characteristics of the tympanic membrane. Gently withdraw the speculum while observing the ear canal. Assess other ear.	If signs of infection are present, change to a clean speculum prior to examination of the opposite ear to avoid introduction of potentially infectious material.
Decontaminate or dispose of used specula.	Reusable specula are lightweight yet durable, and may be autoclaved, boiled, or either soaked in disinfectant or wiped thoroughly with a disinfectant towelette
Wash hands.	
Document findings.	

Images of normal and abnormal tympanic membrane can be viewed at:  
[http://www.entusa.com/eardrum\\_and\\_middle\\_ear.htm](http://www.entusa.com/eardrum_and_middle_ear.htm)

## SUCTIONING: TRACHEAL

### I. Personnel

- Licensed nurse
- UAP determined competent and willing to accept responsibility of delegated nursing intervention for specific student
- Student can learn to self-suction

### II. Definition/Purpose

Tracheal suctioning is a component of bronchial hygiene therapy and mechanical ventilation and involves the mechanical aspiration of pulmonary secretions from a student with an artificial airway. Suctioning helps ensure optimal ventilation for the student with an artificial airway and helps prevent infections.

The purpose of tracheal suctioning is to maintain airway patency by assisting in the removal of secretions.

For the student with a tracheostomy, tracheal suctioning may be indicated when the student demonstrates coarse breath sounds or experiences difficulty breathing through the trach, yet is unable to generate an effective cough to achieve clearance. Suspected aspiration is also an indication for tracheal suctioning.

For the student with a tracheostomy assisted by mechanical ventilation, the need for tracheal suctioning is indicated by coarse breath sounds, increased peak inspiratory pressures during volume-controlled ventilation or decreased tidal volume during pressure-controlled ventilation, inability to generate an effective cough, visible secretions in the airway, or suspected aspiration of gastric contents.

For oral suctioning, see section on Oral Suctioning below.

### III. General Information

Tracheal suctioning at school requires a completed parental consent utilizing the form "Parent/Guardian Request for a Specialized Nursing Care Procedure" (found in Appendix II). As indicated on the form, a written medical authorization for the procedure is also required. The parent/guardian is expected to provide the suction machine, suction catheters of a suitable size, and related supplies. Tracheal suctioning will be performed as a sterile or clean procedure in order to avoid introduction of pathogenic organisms into the respiratory system of the compromised student.

Tracheal suctioning of the student with a tracheostomy will be performed as needed. Routine suctioning on a time schedule without other indication is discouraged. If suctioning is considered as an aspect of routine or necessary trach care, suctioning will precede removal and cleaning of the inner cannula (if present). Excessive suctioning may contribute to increased tracheal secretions, making the procedure counterproductive.

Students with tracheostomies are usually assisted using a portable suctioning device with disposable catheter tips. Students with tracheostomies with mechanical ventilation may have a suctioning device placed in their tubing as part of their oxygen delivery system. This is often referred to as a “closed” system. The nurse will be thoroughly familiar with the student’s equipment and proper use as part of initial assessment, well before the student is in distress and needing assistance.

#### **IV. Potential Complications and Suggested Actions**

The student’s ability to breathe will be arrested during the suctioning procedure. Close and continuous monitoring of the student’s condition before, during and following the procedure is necessary. The application of suction will be for brief (<10 seconds) with intervals of at least one minute between suctioning passes to allow the student to rest and recover as needed.

Serious complications of tracheal suctioning may include: hypoxia and/or hypoxemia, mechanical trauma to the trachea and/or bronchial mucosa, respiratory arrest, cardiac arrest, bronchospasm, infection and pulmonary hemorrhage. The student may experience shortness of breath, dizziness or agitation during the procedure. The role of the nurse must include attention to the student’s needs for reassurance and rest between intervals of suctioning.

The student’s individualized health care plan may call for the student to be hyperventilated prior to the initiation of suctioning. The student may be hyperventilated for two minutes prior to and following suctioning. This will help reduce the risk of induced hypoxia. Hyperventilation can be accomplished by increasing the FIO<sub>2</sub>, by manual ventilation, or by temporarily increasing the rate or tidal volume on the ventilator. The actual suctioning of secretions will be limited in duration to no more than 10 seconds maximum with a break of at least 1 minute between passes of the suction catheter. This will allow the student to briefly rest and recover, and allow the nurse to assess the student’s tolerance of the procedure and condition.

Respiratory rate, heart rate, color and general state of anxiety will be monitored before, during and after the procedure. If any changes are noted, discontinue suctioning immediately and ventilate the student as needed.

#### **V. Special Considerations**

Gloves will be worn during the procedure. Mask and goggles will be worn by the nurse if there is a risk of splashing body fluids. Sputum and secretions obtained by suctioning must be considered a potential biohazard and bagged and disposed of accordingly.

Sterile saline may be used to clear the suction catheter in the event the catheter becomes occluded with thick secretions during suctioning.

Instillation of small amounts of sterile saline to loosen secretions for suctioning is not considered a routine aspect of this procedure for every student, but may be used according to individual student orders and individualized health care plan.

Field trip considerations:

- What environment will the student be going to – will there be dust or other foreign particles in the air, will there be a change in the ambient temperature or humidity?
- If using an electric suction machine, will electricity be available?
- If using a portable suction machine, are batteries fully charged?
- Do you have adequate supplies such as disposable catheters and gloves, an extra trach and trach ties?
- Will there be hand-washing facilities or hand sanitizer available?
- Does a licensed health care provider need to go on the field trip and are the trach cares delegated to a UAP on a regular basis?
- How will communication be handled in case of an urgent or emergent situation?

## VI. Required Equipment

*Verify availability and proper function at the beginning of each school day*

Suction machine with calibrated regulator

Collection receptacle

Tubing with port to attach a sterile suction catheter

Sterile catheter

Sterile or clean disposable gloves

Sterile water or saline with reservoir container

Manual resuscitation bag

Stethoscope

Gloves and mask as needed for protection of the nurse

Suction catheter size is determined by the size of the artificial airway (tracheostomy tube). The needed size can be calculated by doubling the size of the trach tube and adding 2. (For example: Size 6 trach tube needs 14 Fr. Catheter  $(6 \times 2) + 2 = 14$ ).

## VII. Documentation

The school nurse is responsible for determining whether documentation will be on paper on a procedure log, or on Student Health Record. Every episode of tracheal suctioning performed will be documented.

Documentation includes assessments prior to suctioning, student toleration of the procedure, and color, odor, consistency and amount of secretions.



## SUCTIONING TRACHEAL

ESSENTIAL STEPS	KEY POINTS AND PRECAUTIONS
Wash hands.	
Assess the student's condition, including respiratory rate and effort, and auscultation of the chest.	Confirm the need for suctioning.
Assemble equipment. Prepare sterile water or saline as needed. Confirm the suction machine is working and check suction vacuum setting.	The pressure will be as set as low as possible to be effective. Safe limits are 80-120mmHg for adults and 40-80 mmHg for pediatric or infant patients. The patency of the suction catheter is tested by aspirating sterile normal saline through it.
Calmly inform the student about what you are going to do to assist him or her.	
Position student in an upright position (45-90 degrees) if possible.	Allows optimal respiratory effort.
Hyper-oxygenate, if possible	Prepare the student for the procedure.
Open the catheter packet	Use sterile technique
Apply gloves	Maintain sterility to the glove you will suction with. Pour sterile water in cup if using open system.
Connect the tubing to suction catheter.	Keep sterile hand sterile.
Instill several drops of sterile saline into the trach if ordered by the physician.	The sterile saline may be of assistance in loosening thick secretions, but also carries the risk of induces aspiration. The instillation of saline will only be done on specific physician orders or parent request.
Gently insert the suction catheter into the trach tube without applying suction. Advance the catheter only to a distance just short of the length of the trach tube. Stop advancing the catheter if an obstruction, even slight, is felt. When the catheter is in position, withdraw the catheter slightly and apply suction. Withdraw the suction catheter in a rotating motion with intermittent suction. Mentally count seconds with suction applied and limit to no more than 10-15 seconds maximum. Withdraw the catheter using active suction in order to remove secretions in the trach tube.	Never force a catheter further if an obstruction is felt.

Allow the student to rest and breathe between suctioning episodes.	
Repeat suctioning with reinsertion of the catheter up to three times.	Suctioning is traumatic to tissues and temporarily arrests the student's ability to breath. If the trach remains obstructed or the student is still unable to breathe comfortably after three attempts at suctioning, referral to the medical provider or EMS will be considered.
If student is on a ventilator, reattach the ventilator tubing if not using a closed system.	Assure pre-suctioning connections and settings are in place and functioning.
Bag and discard disposable supplies in a closed plastic bag. Suction returns may be carefully poured into the toilet and flushed. The suction receptacle will be washed with soap and water. The suction machine and needed supplies will be prepared for next use.	All used materials and suction returns will be considered contaminated with potentially infectious body fluids and universal precautions applied.
Wash hands.	
Document	Record indications for suctioning. Document hyperventilation method if performed. Document student's apparent toleration of procedure, and assessment following. Record the color, consistency, odor and amount of secretions obtained through suctioning. Note pertinent settings on ventilator follow procedure as indicated. Close by noting where the student went next and the accompanying individual responsible for supervising the student, if not the nurse.

Resources:

- "Tracheostomy care: An evidence-based guide to suctioning and dressing changes"; Nance-Floyd, Betty, MSN/Ed, RN, CNE; July 2011 Vol. 6 No. 7; Available at <http://www.americannursetoday.com/tracheostomy-care-an-evidence-based-guide-to-suctioning-and-dressing-changes/>
- "Pediatric Tracheostomy Home Care Guide"; Cook Childrens; (2010). Available at [https://www.cookchildrens.org/SiteCollectionDocuments/HomeHealth/Education/RespiratoryTherapy/Tracheostomy/CCHH\\_Trach\\_PediatricTracheostomyHomeCareGuide.pdf](https://www.cookchildrens.org/SiteCollectionDocuments/HomeHealth/Education/RespiratoryTherapy/Tracheostomy/CCHH_Trach_PediatricTracheostomyHomeCareGuide.pdf)

## SUCTIONING: ORAL

### I. Personnel:

- Licensed Nurse
- UAP who has been determined competent by an RN and willing to accept the responsibility of the delegated nursing intervention for specific students
- Student may learn to do self-oral suctioning

### II. Definition/Purpose:

The purpose of providing assisted mechanical suctioning of the oral cavity is to aid the student in the clearance of normal secretions when impairment exists such that the student is not able to perform this function independently. The goal is to assist the student in maintaining optimal ventilation and respiratory status.

### III. General Information:

Signed parental/guardian consent, accompanied by medical authorization for the suctioning procedure, are required. Unnecessary oral suctioning will be avoided to reduce chances of infection or injury. The student in need of oral suction may be assessed on a regular and frequent basis, with suctioning provided as needed. The school nurse is responsible for creating the plan of care (Individualized Healthcare Plan, or IHP) for the student that describes the need for suctioning and frequency of nursing assessment.

Indications for oral suctioning may include: noisy, moist-sounding respirations, signs of respiratory distress (increased respiratory rate, increased heart rate, and use of accessory muscles to breath, cyanosis, and increased work of breathing), secretions are visible in the mouth and cannot be spontaneously cleared by the student's voluntary effort, and/or ineffective coughing.

### IV. Potential Complications and Suggested Actions:

For some students, increased need for suctioning may be a sign of illness or infection. A student needing frequent suctioning will be monitored closely.

Undesirable side effects, including but not limited to cyanosis, dizziness, generalized discomfort, tachycardia, or increased difficulty breathing. The treatment will be ceased and the patient reassessed. The parent/guardian will be notified and, if appropriate, the physician consulted. The equipment will be inspected for proper assembly and function. Any adverse reactions will be documented, including the notification of responsible parties, including the school nurse.

### V. Special Considerations:

Gloves will be worn during the procedure. Mask and goggles will be worn if there is a risk of splashing or splattering secretions. Sputum and secretions obtained through suctioning must be considered a potentially contaminated biohazard and disposed of appropriately. Flushing the suction receptacle contents in the toilet is acceptable as long as splashing or splattering is minimized.

As the oral cavity is non-sterile, clean tap water may be used to flush the suction catheter.

Field Trip considerations:

- What environment will the student be going to – will there be dust or other foreign particles in the air, will there be a change in the ambient temperature or humidity?
- If using an electric suction machine, will electricity be available?
- If using a portable suction machine, are batteries fully charged?
- Do you have adequate supplies such as disposable catheters or oral suctioning tool and gloves
- Will there be hand-washing facilities or hand sanitizer available?
- Does a licensed health care provider need to go on the field trip and are the oral suction cares delegated to a UAP on a regular basis?
- How will communication be handled in case of an urgent or emergent situation?

## **VI. Required Equipment**

*Verify availability and proper function at the beginning of each school day*

Suction machine including collecting bottle, connecting tube and adapter when needed;  
Sterile or clean disposable suction catheters.

Non-washed clean paper cups and water;

Disposable clean vinyl gloves;

Clean tissues;

Plastic-lined wastebasket (kept beside machine for soiled articles).

## **VII. Documentation**

Pre- and post-procedure assessments, including description of procedure and results, will be recorded in the student's health record.

**SUCTIONING: ORAL**

<b>ESSENTIAL STEPS</b>	<b>KEY POINTS AND PRECAUTIONS</b>
Assess student.	Verify the need for the suctioning procedure.
Wash hands.	
Assemble equipment and verify	The patency of the section catheter is tested by aspirating water through it.
Calmly inform the student about what you are going to do in order to assist him or her.	
Wear gloves; mask and goggles as needed.	
Position student in an upright position if possible.	Allows optimal respiratory effect.
Briefly pass oral suction device (“tonsil tip” into the oral cavity. Repeat as needed.	Never force a catheter if obstruction or resistance is felt. Observe for and avoid stimulating gag reflex if possible. Allow the student to inhale and exhale between passes of the catheter. Suctioning may temporarily obstruct the student’s ability to breath.
The same suction catheter tip may be used throughout the day. Lavage with clean water after each use and store in clean plastic bag.	All used materials will be considered contaminated.
The suction canister will be discarded in its entirety daily, or if reuse is necessary, thoroughly washed and disinfected and allow to dry between uses.	Suction canister will be stored with the suction machine with all openings closed except during emptying and cleaning the canister for reuse.
Record on the student health record the color, consistency, odor, amount of secretions, and student condition. Record as well any changes in characteristics compared to previous procedures for the student.	

**Resources:**

- “Suctioning (non-tracheostomy)”; Connecticut State Department of Education: (2014). Available at <http://www.sde.ct.gov/sde/cwp/view.asp?a=2663&q=334308>
- “Oral Suctioning” BC Open Textbooks clinical Procedures for Safer Patient Care (2010) Available at <https://opentextbc.ca/clinicalskills/chapter/5-7-oral-suctioning/>

## TRACHEOSTOMY CARES

### I. Personnel

- Licensed Nurse
- UAP who has been determined competent by an RN and willing to accept the responsibility of the delegated nursing intervention for specific students
- Student may learn to do self-oral suctioning

### II. Definition/Purpose

A tracheostomy involves the surgical opening of the trachea to provide and secure an open airway. A removable tube is placed in the stoma to maintain patency of the stoma.

Tracheostomy care includes management of the tracheostomy wound and the airway device. The purpose of providing cares to the individual with a tracheostomy is assure patency of the artificial airway by removal of secretions, assess and promote skin integrity at the trach stoma, and to reduce the risk of infection through hygienic measures.

### III. General Information

The student may or may not be able to augment respirations through the tracheostomy with mouth breathing.

Tracheostomy care is a sterile or clean procedure. Cares to the trach may include tracheal suctioning, however, suctioning will not be performed unless indicated by the student's condition.

The student's respiratory status is assessed. The inner cannula (if present) is removed, cleaned and replaced. Neck ties securing the outer cannula are inspected and replaced as necessary. Skin around the stoma and the neck where ties are rubbing is inspected, cleaned, and topical products applied only as ordered. The presence of excoriated or non-normal skin, presence or absence and quality of drainage including color, odor, and quantity, are all noted and documented.

### IV. Potential Complications and Suggested Actions

If trach has an inner cannula, when removing the inner cannula for cleaning, the outer cannula must remain secured at all times. There is a potential risk of expulsion of the trach cannula during cares. Keeping one hand on the outer cannula (without occluding the patent opening) during cares to the neck ties will help assure the trach remains in place.

If trach is expelled or dislodged, assess student's respiratory status. Call 911 if student is in emergency respiratory distress. If student does not appear to be in emergency respiratory distress, follow procedure below for Emergency Reinsertion of Trach Tube. Notify parent/guardian.

Suctioning can be a traumatic procedure to tissues and the student's ability to breath. Suctioning will be undertaken carefully while closely monitoring the student's response and toleration of the procedure throughout.

Tracheostomy cares are a sterile or clean procedure. There is a risk of introducing potentially infectious organisms in the process of disrupting the integrity of the trach by withdrawing the inner cannula and performing cares including suctioning and cleansing of the device. Assuring a sterile field for cares and supplies, assembling all equipment and gloving properly, use of stringent infection control practices are all important aspects of tracheostomy cares.

#### **V. Special Considerations**

The student with a tracheostomy can be compromised by exposure to or inhalation of dust, debris, powders or aerosols. The individualized health care plan will include consideration of the student's physical learning environment and reduce or eliminate such exposures.

Occasionally a student with a tracheostomy and a productive or explosive cough may put others at risk of exposure to potentially infectious sputum and secretions if the products of coughing fly out and away from the trach. A trach cover will be in place except for during suctioning. This helps keep the trachea moist and prevent secretions from being expelled explosively from the trach. Some students experience excessive production of secretions and these will at times flow unrestricted from the open patient trach. Consideration will be given but only the infection control considerations of the individual with the trach, but also the safety needs of students and staff around him or her. Trach bibs are available which can provide a means to catch explosive secretions without obstructing the patency of the tracheostomy. The school nurse is responsible for working with the parent/guardian and medical provider to plan for such precautions.

Occasionally the parent/guardian of a student with a well-established trach will propose that trach cares for the student can be performed without sterile precautions and will decline to provide supplies for sterile procedures. In such situations, the school nurse will make an effort to assess the knowledge base of the parent/guardian with regard to appropriate cares. Input from the medical provider if a non-sterile procedure is requested will definitely be sought. Written authorization and specific description of the requested procedure must be provided. The school nurse will plan procedural cares that optimize infection control practices given the parameters proposed by the parent and authorized by the medical provider.

#### **VI. Required Equipment for Sterile Trach Cares**

- A sterile drape to provide a field for supplies and equipment
- Sterile 4x4 gauze dressings
- Sterile cotton tipped applicators
- Sterile water
- Hydrogen peroxide
- Small brush suitable for cleaning the inner cannula

Sterile gloves  
 New sterile disposable cannula (unless the existing inner cannula is non-disposable)  
 Trach ties  
 Stethoscope  
 Scissors  
 Bag for disposal of contaminated supplies and materials.

## VII. Documentation

The school nurse is responsible for documentation to be completed in Student Health record. In either case, the time of the procedure, the appearance of the stoma and surrounding area, the presence or absence of drainage, specific description of cares provided, the appearance, color, odor and quantity of secretions from the trach, the student's ability to perform productive cough or use of suctioning if needed, the student's condition before, during and after the cares are all part of documentation.

### TRACH CARE

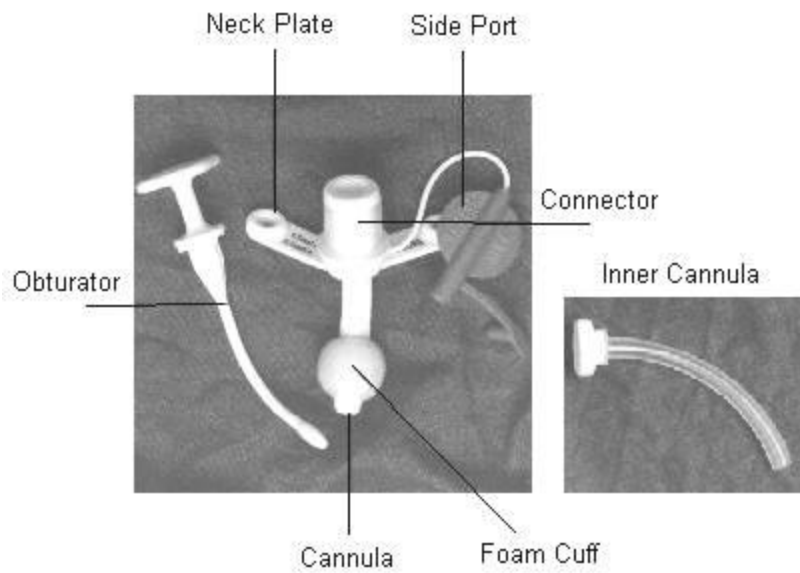
ESSENTIAL STEPS	KEY POINTS AND PRECAUTIONS
Review student's individualized health care plan, including specific description of cares to be provided for the student.	
Wash hands.	
Assemble needed supplies and equipment.	Provide a draped field for supplies and equipment.
Explain procedure to student	
Position in upright or semi-Fowler's position (45-90 degrees)	Provides optimal breathing efficiency
Assess student including auscultation of chest and physical inspection of trach stoma and surrounding area. Determine effectiveness of cough and/or need for suctioning.	Determine tube placement and need for suctioning or student coughing.
Remove soiled trach dressing if present.	
Remove and clean the inner cannula: place in basin with sterile water and use	



brush to remove debris and secretions from inner and outer surfaces of the cannula. Place washed catheter in second basin of sterile water to rinse. Shake free of visible droplets of water before replacing in outer cannula. Insert inner cannula so that it follows the curvature of the outer cannula.	
Clean stoma area.	Use cotton tipped applicators soaked in sterile water to remove any dried secretions. Note any redness or skin breakdown.
Remove and replace trach ties	Use one hand to stabilize the trach and maintain its position. Any movement of the trach may produce coughing.
Replace dressing	Use clean dry 4x4 gauze precut or cut with a slit to allow it to lie flat against the skin around the trach.
Bag all used supplies and materials.	Treat as biohazard wastes, contaminated with potentially infectious body fluids.
Wash hands.	
Reassess student. Return student to former position and/or activity.	
Document procedure and findings.	

## PARTS OF A STANDARD TRACHEOSTOMY TUBE

### Single Cannula Silicone Tube



## TRACHEOSTOMY: EMERGENCY REINSERTION OF TRACH TUBE

### I. Personnel

- Registered Nurse or Respiratory Therapist
- This procedure is in the scope of practice of a Licensed Practical Nurse only under the supervision of a Registered Nurse or Respiratory Therapist.

### II. Definition/Purpose

The purpose of reinstating the trach tube is to maintain an artificial airway in the event the trach tube is accidently or inadvertently expelled.

### III. General Information

***If the student is on mechanical ventilation, this is a medical emergency - Call 911.***

This is not a routine procedure. The expectation of the parent/guardian that school personnel may attempt emergency reinsertion will be discussed well in advance of emergency, and be part of the student's IHP (individualized health care plan). Stay with student and have another staff member notify the parent. If the parent prefers reinsertion not be attempted, or if in the judgment of the licensed nurse reinsertion is not possible or appropriate, or if supplies such as a spare trach not available, the student will be provided cares consistent with a medical emergency and 911 will be called.

The student whose trach is reinserted under emergency conditions must be sent home and referred to the child's medical provider to confirm placement and provide medical clearance to return to school.

### IV. Potential Complications and Suggested Actions

Complications can include hemorrhage, improper placement, penetrating neck trauma, upper airway trauma, laryngeal trauma, esophageal damage. Any difficulty in reinsertion of the trach, including signs of trauma, and the attempt to replace the trach will be discontinued. The student will be manually ventilated as needed while awaiting EMS, with a clean dressing covering the stoma to keep the area free of foreign object and reduce air escaping during mouth ventilation.

### V. Special Considerations

Respirations must be maintained for the student. Some students are able to perform limited mouth breathing if properly positioned. Close supervision of the student's airway and breathing must be provided at all times. The expelled trach will not be reinserted. One size smaller trach may be needed for reinsertion due to swelling. Reinsertion of the trach may be traumatic and result in some bleeding from the stoma or with suctioning.

### VI. Required Equipment

Gloves  
Sterile water or water-soluble jelly to lubricate the tube  
Obturator  
Twill tape  
Stethoscope

Syringe for balloon fill for cuffed trach.

It is ideal for parents to provide a replacement trach that is one size smaller than that usually worn in order to facilitate rapid and complication – free replacement under emergency circumstances.

## VII. Documentation

The circumstances of loss of trach tube will be fully described. Student assessment pre- and post-procedure will also be described. Parental notification and referral to medical care will also be noted.

### EMERGENCY REINSERTION OF TRACHEOSTOMY TUBE

ESSENTIAL STEPS	KEY POINTS AND PRECAUTIONS
<b>If the student is on a mechanical ventilator, expulsion of the trach tube is a medical emergency and 911 must be summoned immediately.</b>	
Wash hands, glove. Assemble appropriate equipment.	
Hyperextend the neck with the student in semi-Fowler's, if possible.	
Manually ventilate the student if needed to maintain ventilation. This may require temporarily covering the stoma with a clean 4x4 dressing and using a bag-valve-mask apparatus for ventilation.	
Suction if necessary.	
Prep trach tube.	If using a cuffed trach, check the balloon with 5cc of air, check for leaks. Deflate balloon.
Lubricate tube with water or sterile water and soluble jelly.	This prevents trauma to tissue while reinserting.
Insert obturator into trach tube	Obturator covers edge of trach and assists in reinsertion
Insert trach tube with obturator into trach stoma.	Care must be given not to force the tube and to follow the natural curve needed to get into

	trachea. Bleeding as a result of trach reinsertion is not uncommon. Discontinue attempt if obstruction is encountered or bleeding is severe. Continue to manually ventilate as needed.
Withdraw obturator. Manually ventilate now as needed.	
Inflate the trach cuff	If using cuffed trach
Ventilate the student	Listen to ventilation to assess both lungs are being ventilated.
Apply twill tape to secure trach	Tie using a finger between the neck and twill tape to assure the tape is not too tight.
Apply 4x4 dressing to site, cut and placed so as not to occlude or cover the trach tube opening.	This will absorb any bleeding and/or drainage.
Assure 911 has been called. Assure parents/guardians have been contacted and summoned to the school.	Correct placement of the trach tube must be confirmed and outcome verified. Student will be medically stable for readmission. Readmission is subject to medical clearance, parent/guardian concurrence and school nurse judgment.
Document actions including student response, transport, and parental involvement.	

## TRACHEOSTOMY TUBES: USE OF RESUSCITATION BAGS

### I. Personnel:

- Licensed Nurses
- UAP who has been determined competent by an RN and willing to accept the responsibility of the delegated nursing intervention for specific students

### II. Definition/Purpose:

Maintain ventilation for artificial airway and mechanically ventilated patients until emergency services arrive, in the event of failure of mechanical or independent ventilation.

### III. General Information

Resuscitation bags will be within easy reach for all patients with artificial airways. These bags will be periodically checked for correct function.

Resuscitation masks will be with all patients with artificial airways, to facilitate ventilation in the event of loss of airway. Care must be taken to assure that masks are appropriately sized. The parent or guardian will provide the resuscitation bag & mask correctly sized for their student.

### IV. Potential Complications and Suggested Actions:

The bag does not stay inflated:

- Check connection to oxygen source.
- Check for tear or leak in bag
- Assure that face seal is adequate (if using a mask)
- If relief valve is in use, check valve for correct function.
- Check for incorrect bag assembly

Manual ventilation is a sign of medical emergency. The student who is unable to self-regulate respirations is at risk for:

- Barotrauma caused by excessive ventilating pressure.
- Inadequate ventilation causing increased carbon dioxide levels.
- Hyperventilation causing decreased carbon dioxide pressure.
- Hypoxemia from ventilation with inadequate oxygenation.

Emergency medical support (EMS) for the affected student will be called immediately upon cessation of normal respiratory status. If bagging is done for brief periods of time, adequacy of ventilation can be assumed if chest excursion and respiratory rate are matched to what the patient was receiving on the mechanical ventilator. Breath sounds will also be auscultated to assess adequacy of ventilation. Short-term oxygenation can be assessed by noting the absence of cyanosis.

**V. Special Considerations:**

The resuscitation bag will be with the student with an artificial airway at all times. The nurse will check on a **daily** basis to assure the bag is with the student, fits correctly, and performs properly. Don't assume that the student will automatically have a big-mask with them at all times.

**VI. Required Equipment:**

Bag-valve-mask or bag-valve combination for attachment to the trach, sized to the student's needs.

**VII. Documentation:**

Events and circumstances resulting in the need for manual ventilation will be described. Student assessments pre- and post-procedure, when the student is turned over to the cares of paramedics, will be documented. Parental and school nurse notification (with times) will be included in the student health record.

**TRACHEOSTOMY TUBES: USE OF RESUSCITATION BAGS**

<b>ESSENTIAL STEPS</b>	<b>KEY POINTS AND PRECAUTIONS</b>
Assess student. Explain what you are going to do to assist him or her.	
Select correct size bag, and mask if applicable.	Will be readily available. Check daily.
If student is on oxygen, connect resuscitation bag to the oxygen delivery system.	
Test the system, making sure bag is intact, properly assembled, and functioning.	Assess connection between bag and trach tube.
Firmly and steadily squeeze the bag at the rate of 15-20 respirations/minute, allowing the bag to fully re-inflate between breaths. Observe for chest excursions.	Assess adequacy of ventilation. Match physiologically normal respiratory rate for age.
Report to parent/guardian and school nurse.	
Document cares, including student assessment and disposition.	The school nurse is responsible for planning student's readmission to school following event.

## URINARY BLADDER CATHETERIZATION

### I. Personnel

- Licensed Nurse
- UAP who has been determined competent by an RN and willing to accept the responsibility of the delegated nursing intervention for specific students

### II. Definition/Purpose

The purpose of urinary bladder catheterization is to empty the bladder at appropriate intervals when normal physiological mechanisms are not operating to allow normal urination.

The catheterization procedure may be “sterile” or “clean”. An individual who requires catheterization as a permanent means of eliminating urinary waste will often utilize a “clean” procedure. An individual at particular risk for adverse consequences of infection or for whom catheterization is a temporary means of elimination may require a “sterile” technique. In either instance, infection control practices on the part of the nurse are paramount in providing safe and appropriate cares to the student.

### III. General Information

Catheterization at school requires parental consent in the form of the completed “Parent/Guardian Request for Specialized Care Procedure” (see appendix for form). As indicated on this procedure consent, medical authorization for the procedure at school is also required. The parent is expected to provide all equipment for the procedure, including catheters for single use or reuse if the procedure is “clean” not sterile, lubricant, antiseptic supplies for cleansing the perineum and gloves (required if the procedure is to be sterile in technique. Otherwise clean, single use gloves may be used from school supplies.) It is very helpful to have a small, washable basket or basin for all supplies to be collected and taken to the location of the procedure, then returned to the health office for storage.

### IV. Potential Complications and Suggested Actions

Consider having a second adult present during the procedure. The student may be positioned in such a way to prevent the flow of urine through the catheter. Repositioning slightly may help.

For emptying a flaccid bladder, the method of applying pressure over the symphysis pubis to expel urine may help assure complete emptying. This technique is sometimes referred to as Crede’s method. This is sometimes helpful in persons who experience bladder retention secondary to spinal cord injury (neurogenic bladder).

The urine obtained through catheterization will be examined for cloudiness, particulates, blood, or strong odor. Documentation will be made of findings and reported to the



parent/guardian and school nurse. Absence of urine on catheterization not readily corrected by repositioning of the student, applying the Crede method, or reinsertion of the catheter will be reported.

Difficulty in passing the catheter into the urethra may be encountered if the student is tensing the pubic muscles. Encouraging the student to practice tensing and relaxing the muscles of the pubic area and insertion of the catheter while muscles are relaxed may aid the procedure.

The procedure will not be carried out with a struggling or resistive child; the procedure will not traumatize the tissues of the meatus and urethra in any way. The presence of frank blood around the catheter or complaints of severe pain are cause to discontinue the procedure and notify parent/guardian or school nurse.

#### **V. Special Considerations**

The procedure will be carried out in such a way and in a suitable location in order that the dignity and privacy of the student are protected, and adequate cleanliness and infection control measures may be applied.

#### **VI. Required Equipment**

Gloves (sterile single use or clean single use, as specified by procedure request)

Water-based Lubricant

Collection receptacle

Cotton Balls or Gauze for cleaning the perineum

Antiseptic Solution

Disposable Drape if available

Sterile catheters of appropriate size (parents may request reuse of clean catheters, and will provide specific instructions for disinfection and storage of used catheters. Reused catheters, even if disinfected, can harbor pathogens and parents will be encouraged to limit reuse and provide new catheters frequently.)

#### **VII. Documentation**

The school nurse is responsible for determining if documentation is to be written in the form of a daily procedure log, retained in hard copy form in the health office, or on Student Health Record. In either form, the amount and quality of urine obtained will be documented, as well as the condition of the student following the procedure.

## URINARY CATHETERIZATION

ESSENTIAL STEPS	KEY POINTS AND PROCEDURES
Assemble necessary equipment in a private location suitable for the procedure. If the student is to be lying down during the procedure, a clean protective disposable pad or disinfected surface will be placed under the student to promote infection control.	Find a suitable location such as <ul style="list-style-type: none"> <li>• A modified bathroom</li> <li>• Exercise table</li> </ul> Provide signage for bathroom Surface will be ergonomically appropriate for school staff to assist student. Procedure will not be performed on the floor.
Assess readiness of the student for the procedure and comfort level. Answer questions, encourage relaxation.	Involve student in plan to learn self-care. Assess progress of student learning self-care for bladder catheterization.
Wash hands thoroughly.	
Position student on back with knees flexed and separated.	
Open sterile catheterization tray, or arrange supplies on clean surface. Drape student if drapes are provided.	
Put on gloves.	
Apply lubricant to tip of catheter.	
Apply antiseptic solution to cotton balls or gauze.	
<p><b>FEMALES:</b>            Using thumb and first finger of non-dominant hand, gently pull up and separate the labia minora and visualize the urethra. Cleanse the labia urethral meatus with three single downward strokes, each time using a clean cotton ball or swab. Assuring the distal end of the catheter is in the collection receptacle, gently insert the catheter into the urinary meatus until urine flows.</p> <p>Advance the catheter an additional 1 to 2 inches.</p> <p>When urine flow has ceased, pinch catheter and gently withdraw.</p>	Hold the labia open with the non-dominant (now non-sterile) hand throughout the procedure.
<b>MALES:</b>	Resistance may be met when encountering the

<p>Grasp the penis in the non-dominant hand. Retract the foreskin if necessary to expose the urethral meatus. Cleanse the meatus using three circular motions, using a clean cotton ball or swab for each stroke. Gently stretch the penis and lift to a 90-degree angle to the body. Exert slight pressure to widen the urethral opening. Assure the distal end of the catheter is in a collection receptacle. Insert the catheter into the urethral opening until the urine starts to flow.</p>	<p>urethral sphincter. Ask the student to inhale deeply and advance the catheter at that time.</p> <p>Do not force the catheter that does not easily enter the meatus.</p>
<p>When urine flow has ceased, pinch catheter and gently withdraw.</p>	<p>Replace the retracted foreskin to normal position if necessary in the uncircumcised male student.</p>
<p>Set catheter and receptacle aside. Remove drapes and other used materials. Assist student with dressing and repositioning.</p>	<p>Cleanse the labia or glans and meatus with water to prevent skin irritation from antiseptic solution, and dry the area. Praise the student for his or her cooperation.</p>
<p>Measure and assess qualities or urine.</p>	
<p>Dispose of soiled supplies including catheter if indicated in plastic bag, tied closed to prevent inadvertent contact by others.</p>	
<p>Document procedure, including results and student condition on completion.</p>	

### Resources:

- “Review of Intermittent Catheterization and Current Best Practices”; Newman, Diane K., Willson, Margaret M.; UROLOGIC NURSING / January-February 2011 / Volume 31 Number 1. Available at <http://www.sun.org/download/education/2013/article3101229.pdf>
- “Clean Intermittent Catheterization”; HealthyChildren.org (2013). Available at <http://www.healthychildren.org/English/health-issues/conditions/chronic/Pages/Clean-Intermittent-Catheterization.aspx>
- “Enabling school staff to undertake clean intermittent catheterization”; Searles, Joanne, MmedSci, RGN, RSCN; (2010). Available at <http://www.nursingtimes.net/nursing-practice/specialisms/continence/enabling-school-staff-to-undertake-clean-intermittent-catheterisation/5022485.article>

## VAGAL NERVE STIMULATOR

### I. Personnel:

- Licensed Nurses
- UAP who has been determined competent by an RN and willing to accept the responsibility of the delegated nursing intervention for specific students.

### II. Definition/Purpose:

The vagal nerve stimulator, or VNS, is an implanted device that can release an electrical impulse at regular intervals and/or on demand to interrupt abnormal neurological functioning resulting in seizure activity. Electrical stimulation is achieved by an implanted device under the clavicle with a lead wire extending to the vagus nerve. The VNS is used to augment traditional medication therapy for the management of seizures.

The procedure involves passing or sweeping a magnet over the approximate location of the implanted VNS, causing it to release an electrical impulse. The procedure can be repeated multiple times as needed, as ordered by the neurologist.

### III. General Information:

The VNS is used primarily in individuals with severe refractory seizures uncontrolled despite medication management. The VNS can provide an effective alternative or augmentative therapy when medication toxicity becomes a concern.

The parent/guardian of the student with VNS provides a completed seizure action plan, as well as written consent and description for the procedure for the student's IHP (individualized health care plan). Medical authorization is also required for the use of the magnet at school to treat seizure activity. The school nurse is responsible for identifying school personnel who will be trained in use of the VNS, and for periodically assessing their familiarity with the performance of the procedure and any other pertinent aspects of the student's emergency health care plan.

The only contraindication to VNS therapy is a previous bilateral or left cervical vagotomy (resulting in surgical absence of vagal nerve available for stimulation.)

### IV. Potential Complications and Suggested Actions:

The student with VNS may experience mild tingling or parasthesia over the cervical region when trains of electrical impulses are delivered. Some students may experience mild hoarseness, vocal alternations, or cough, when impulses are delivered. Occasionally students may experience subjective dyspnea for a short period with electrical pulses. These sensations are normally fleeting and benign. More severe complaints will be referred to the parent/guardian and neurologist.

**V. Special Considerations:**

The parent/guardian provides information on placement of the implanted generator. The parent/guardian provide the magnet used to trigger impulses as ordered by the prescriber for seizure management.

**VI. Documentation:**

The school nurse will make every attempt to capture documentation of all events when the magnet is used at school for seizure activity. This may involve simple manual documentation or reporting systems that can be used by non-health staff working with the student.

**VAGAL NERVE STIMULATOR:**

<b>ESSENTIAL STEPS:</b>	<b>KEY POINTS AND PRECAUTIONS</b>
Review the individual student's IHP (individualized health care plan)/seizure action plan including indications for use of VNS.	Understand use of the VNS in context of student's comprehensive seizure management and history.
Assess student capacity to self-administer treatment. If the student is unable, other school personnel will need to assist.	For self-management, student must be able to anticipate seizure. Student must be able to reliably be in possession of magnet at all times in addition to initiating appropriate and effective use of the VNA.
On observation of seizure activity, sweep the magnet over the designated chest area one time.	The magnet will be kept in a designated location for ready access to all times. The magnet will travel with the student on field trips.
Implement other aspects of seizure care: monitor airway and breathing, protect from injury, assess level of consciousness, observe and be prepared to document characteristics including duration of seizure activity.	In cases of self-management, is student able to communicate need for help?
Notify parents/guardians and summon 911 per individual seizure action plan if seizure activity continues.	
Repeat use of VNS as prescribed for student.	
Document seizure activity, time of onset, and time of use of magnet, including response of student. Document notification of parent/guardian and school nurse. Document 911 if summoned.	The school nurse determines exclusion/readmission as indicated by student condition.

**Resources:**

- “VAGUS NERVE STIMULATION FOR TREATING EPILEPSY”; American Academy of Neurology; (2013). Available at <https://www.aan.com/Guidelines/home/GetGuidelineContent/619>
- “How VNS Therapy works”; Cybertronics; (2014). Available at <http://us.cyberonics.com/vns-therapy/how-vns-therapy-works>
- “Vagus Nerve Stimulator (VNS) Implantation”; Children’s Hospital of Pittsburgh; (2013). Available at <http://www.chp.edu/CHP/vagus+nerve+stimulator+implantation>

## VENTILATOR ASSISTED RESPIRATORY MONITORING

### I. **Personnel:**

- Licensed Nurses
- Licensed Respiratory Therapists

### II. **Definition/Purpose:**

The student who comes to school with assisted ventilation is medically fragile and requires close monitoring and skilled support. The student has experienced or is experiencing either ventilator or oxygenation failure, due to neurological injury or other cause. Assisted ventilation is defined as the application of any mechanical device that, through the manipulation of trans-respiratory pressure, assists or augments the student's oxygenation or ventilation. The following considerations apply:

- The application of mechanical ventilators will be done only with a physician's written orders.
- Mechanical ventilation equipment will not be applied to the student without first being assured that the equipment is functioning properly.
- The set-up, operation, and maintenance of mechanical ventilators will be the responsibility of the respiratory care practitioners or licensed nursing personnel.
- The student with a mechanical ventilator will be closely monitored (see the procedure and flow sheet for performing ventilator checks) by licensed personnel.
- Mechanical ventilators will not be operated without properly functioning alarms.
- Except for emergency circumstances, mechanical ventilators will not be operated without a heated blow by humidification capable of generating 100% relative humidity at body temperature.
- Every effort will be made to include the student in classroom and learning activities.

### III. **General Information:**

A licensed nurse will be on the premises at all times during the regular school day when a student is receiving assisted ventilation.

The needs of individual students with assisted ventilation are complex and unique to every case. The school nurse is responsible for development of the student's individualized health care plan (IHP) which includes the detailed planning and supervision necessary for the student's safety and well-being at school. Numerous personnel may be involved in the care of the student, including but not limited to school personnel and non-school health providers.

Refer to Table 1: Modes of Mechanical Ventilation.

### IV. **Potential Complications and Suggested Actions:**

The expectations for the school setting include:

- Assessment and maintenance of adequate therapy,

- Visual observation of adequate chest expansion
- Auscultation of bilaterally equal breath sounds
- Non-invasive monitoring of ventilation and oxygenation.
- Response to alarms and signs of inadequate therapy,
  - Assess the status of the student. Observe for signs of respiratory distress. If present, begin manual resuscitation immediately and call for assistance.
  - Check power source.
  - Check all connectors and seals.
  - Check and confirm alarm and other settings.
  - Even if the student is apparently stable, if the source of alarms cannot be remedied quickly, call 911 and notify parent/guardian. Other complications may include:
    - Hypoventilation and hyperventilation from inadequate or excessive ventilation.
    - Accidental disconnection from the ventilator
    - Loss of airway
- Emergency response,
  - Assess settings according to physician's orders and reconnect the student as soon as possible. Perform immediate and repeated physical assessment to assure the situation is remedied and the student is stable. Initiate and maintain manual assistive ventilation at any time the ventilator is not known to be operating properly.
- Inclusion in the learning environment.

## V. Special Considerations:

- Check daily to assure that all necessary supplies and equipment, in proper functioning order, are received for the student.
- Attempt to keep student away from the airborne irritants or fumes
- The nurse may need to clear the airway of secretions as needed following physician orders and the proper policy/procedure.
- Alert the student's family or DME (durable medical equipment vendor) of any mechanical ventilator equipment malfunction.
- Keep adequate supplies with the student in order to provide adequate care.
- Monitor level of infectious illness in the school and keep family apprised.
- Environmental/infection control considerations
  - Hand washing facility or hand sanitizer available
  - Clean area for storage of supplies
  -

## VI. Documentation

Utilize the **VENTILATOR FLOW SHEET** (in Appendix) making sure that all information is completed and accurate.



**TABLE 1: Modes of Mechanical Ventilation**

- **CMV:** controlled mechanical ventilation: there is no interaction between the student's spontaneous ventilatory activity and the mechanical ventilator. Usually reserved for those who are paralyzed or have no spontaneous respiratory activity.
- **A/C:** assist/control: operator sets the mechanical frequency and volume. If the patient generates sufficient negative airway pressure (adjustable) between machine delivered breaths, the ventilator will give an additional breath of the preset volume. There is no continuous flow between mechanical breaths.
- **IMV:** (continuous flow): intermittent mandatory ventilation: operator selects a frequency and volume. Between mechanical breaths there is a continuous flow of gas through the ventilator circuit, from which the patient breathes at any frequency and volume desired. All IMV modes are generally indicated for use during weaning, or when the patient does not tolerate other modes.
- **IMV:** (demand flow): intermittent mandatory ventilation: operator selects a through the ventilator circuit. However, if the patient initiates a spontaneous breath, the ventilator will deliver gas at a variable flow rate based on patient demand, thereby allowing the patient to select frequency and volume of spontaneous breaths.
- **SIMV:** synchronized intermittent mandatory ventilation: similar IMV except that the ventilator synchronizes the IMV breath with the patient's spontaneous respiratory activity.
- **CPAP:** continuous positive airway pressure: continuous pressure generated at the airway opening (either by mask or artificial airway). Usually has little or no effect on ventilation, but is used as a treatment for oxygenation failure, although does have some beneficial effect with regards to stabilizing the upper airway. Also employed during weaning.

## VENTILATOR-ASSISTED RESPIRATORY MONITORING

ESSENTIAL STEPS	KEY POINTS AND PRECAUTIONS
Greet student. Confirm physician's orders for mechanical ventilation and the specific settings. Verify and confirm settings on the ventilator with the physician orders. Inspect power connection, other connections and alarm settings.	
Assess the student's level of consciousness and activity. Record pertinent observations on flow sheet. Assess vital signs per IHP.	Wheelchair and vent batteries will be charged periodically, whenever student is stationary and outlets available. Monitor use of battery power.
Inspect tracheostomy tube; placement, secured with tics, attached to vent, attached to oxygen source, location and type of suction, presence of drainage, etc.	
<p>In an orderly fashion, assess each category of vent check sheet. If no entry is needed, place a slash in the space.</p> <p>a. <b>DATE:</b> the date the ventilator check was completed, using the format DD/MM/YY.</p> <p>b. <b>TIME:</b> the exact time the ventilator check was completed.</p> <p>c. <b>HR:</b> heart rate at the time of the check.</p> <p>d. <b>BP:</b> blood pressure at the time of the check, showing systolic/diastolic, or mean pressure if applicable based on nursing assessment.</p> <p>e. <b>RESPIRATORY RATE:</b> the number of spontaneous breaths per minute.</p> <p>f. <b>MACHINE RATE:</b> the set respiratory rate on the mechanical ventilator.</p> <p>g. <b>MODE:</b> the ventilator mode. Either IMV, CPAP, SIMV, A/C, PS.</p> <p>h. <b>PATIENT PRESSURE:</b> peak inspiratory pressure as measured on the mechanical ventilator.</p> <p>i. <b>PEEP:</b> positive end expiratory pressure as measured on the mechanical ventilator.</p> <p>j. <b>PRESSURE SUPPORT:</b> level of</p>	<p><b><u>Do not</u></b> change any of these settings unless ordered to do so by a physician. If changes are made they need to be verified by another person to prevent errors.</p>

<p>pressure support (if in use) as measured on the mechanical ventilator.</p> <p>k. <b>CUFF PRESSURE:</b> measured by Minimal Leak Technique (MLT) when cuff is inflated.</p> <p>l. <b>SET TIDAL VOLUME/EXHALED TIDAL VOLUME:</b> the SET is the volume setting from the ventilator. The EXHALED VT is the delivered volume, which must be measured by a spirometer.</p> <p>m. <b>HUMID/TEMP &amp; H<sub>2</sub>O:</b> The temperature will be kept within 34.0 +/- 1.0 C with the exception of use of a heat moist exchanger (HME).</p>	
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## Resources for Technical Assistance for Students who are Ventilator Dependent

- Madonna Rehabilitation Hospital  
Nova Adams  
5401 South St.  
Lincoln, NE 68506  
Phone: (402) 413-3000  
Toll-Free: (800) 676-5448
- “Top 10 care essentials for ventilator patients”; Parker, Laura C. MSN, RN, CCRN;  
March 2012 Vol. 7 No. 3. Available at: <http://www.americannursetoday.com/top-10-care-essentials-for-ventilator-patients/>

# APPENDIX 1

## VITAL SIGNS

### I. Personnel

- Licensed Nurses
- Unlicensed school personnel (UAP) after competency is determined by a licensed health care professional

### II. Definition/Purpose

- Temperature (T) – the level of heat produced and sustained by the body processes.
- Pulse or Heart Rate (P or HR) - The number of heart beats per minute.
- Respirations or Respiratory Rate (R) - The number of breaths taken per minute.
- Blood Pressure (BP) – a measure of the pressure exerted by the circulating volume of blood on the walls of the arteries and veins and on the chambers of the heart. Blood pressure is not checked routinely in the schools as an aspect of the health screening program.
- Level of Consciousness (LOC) – an assessment of stages of response to stimuli.
  - General measures of LOC:
    - Alert, awake and oriented to person, place and time
    - Responds to verbal stimuli
    - Responds to painful stimuli
    - Does not respond to any stimuli

In a medical emergency, assessment of vital signs may yield useful information concerning status of the victim. Over a period of time, repeated measurements of vital signs may provide some objective evidence of whether the victim's condition is improving, stable, or deteriorating.

### III. General Information:

Vital signs of temperature, heart rate, respiratory rate and blood pressure are basic indicators of body function. If an abnormal vital sign is detected, repeat the reading to confirm the vital sign.

### IV. Potential Complications and Suggested Actions:

Findings not consistent with observation of the individual's status suggest equipment may not be working properly or the readings are incorrect. Check equipment. Consider using another piece of equipment if available. Consult with the school nurse.

Readings or findings outside of normal expected limits will be reported to the school nurse immediately.

A medical emergency may exist when vital signs are not within the normal range and/or other signs are noted such as cyanosis (a physical sign causing bluish discoloration of the skin and mucous membranes) or loss of consciousness. 911 will be called immediately.

**V. Required Equipment:**

Blood pressure cuff, calibrated annually

Stethoscope

Electric Thermometer (oral, ear, axillary or temporal scanner)

Watch or clock with second hand

**VI. Documentation:**

Indications for vital sign assessment, as well as other measurements, will be documented. Multiple readings, as in an emergency situation with frequent monitoring, will be recorded in chronological order with time measurements were done.

## HEALTH SERVICES SKILLS CHECKLIST

### BLOOD PRESSURE

*Instructions: An RN is to review with the health tech and sign off on correctly-performed skills three times per school year. When complete, please send form to the Health Services Coordinator.*

- Consult with your nurse about the need to check a blood pressure.
- Assemble your equipment: stethoscope, blood pressure cuff, alcohol wipes.
- Choose the appropriate size BP cuffs (pediatric, adult, thigh).
- Position student comfortably and rest their arm so that it is supported.
- Wrap the cuff around the arm 1-1 ½ inches above the elbow.
- Locate the brachial artery on the inside of the elbow. The center of the cuff will be above the brachial artery.
- Close the valve on the bulb.
- Place the stethoscope diaphragm over the brachial artery and the ear pieces in your ears.
- Inflate the cuff to about 30 mm above the person's normal BP (ask for normal BP reading if it's an adult, or about 30 mm above the normal range).
- Slowly open the valve and allow the cuff to deflate as you listen through the stethoscope.
- Note the measurement when you hear the first sound and last sound through the stethoscope.
- Once you hear the last sound, open the valve completely, allow the cuff to completely deflate and remove it from the arm.
- If you missed the readings and need to retake, allow one minute before re-inflating the cuff.
- Clean the earpiece & diaphragm of the stethoscope with alcohol wipes.
- Document the BP (xxx/xx), including which arm, time of day, size of cuff and other pertinent information.
- Have the student/staff remain in the health office until you have spoken with your nurse.

<b>Normal ranges:</b>	<b>Upper Normal Limit</b>	<b>Lower Normal Limit</b>
Infants:	90/60	65/30
Child:	115/60	65/40
Adult:	120/80	90/60



## HEALTH SERVICES SKILLS CHECKLIST

### EPI PEN ADMINISTRATION

**Call 911**

Place patient supine, elevate legs, loosen clothing (neck).

Select appropriate Epi-Pen auto injector.

Children < 50 lbs.: Epi-Pen Junior Auto-Injector

Adults > 50 lbs.: Epi-Pen Adult Auto-Injector

Grasp Epi-Pen with needle-end tip pointing downward. Never put thumb, fingers or hand over needle-end tip.

Pull off the orange activation cap.

Hold black tip near outer thigh. Firmly place EpiPen into the outer thigh so that the auto-Injector is perpendicular (at a 90 degree angle) to the thigh.

Hold firmly in the thigh for several seconds.

Remove unit, massage injection area for several seconds.

Check Epi-Pen. If needle is exposed, the dose was given. If needle is not exposed repeat steps 4-8.

Continue to monitor student's vital signs and level of consciousness. Stay calm and stay with student. Have someone call parents if they have not already been notified.

Be sure medical personnel and family understand that Epi-pen has been given.

**If EpiPen is administered, 911 must be activated.**

## HEALTH SERVICES SKILLS CHECKLIST

### GLUCAGON ADMINISTRATION

- Assess the diabetic student. Are they alert, talking, having seizures or breathing?
- Call for help. Assign someone to call 911, the nurse and the parents.
- Cut or remove clothing over thigh area.
- Remove the cap from the vial with the powder or tablet.
  
- Take the needle off the syringe, insert into the top of the vial and inject fluid into the vial.
- Remove the needle from the vial, recap.
  
- Roll and mix the contents in the vial until no lumps appear and it's clear.
  
- Reinsert the needle into the vial and remove the contents. Always invert the vial and keep the end of the needle below the fluid level.
  
- Locate site, midway between knee and fold of hip.  
**Inject the full 1.0ml for any child over 5 years old.**
  
- Position child on his/her side. Assess the airway if child vomits.

## HEALTH SERVICES SKILLS CHECKLIST

### GLUCOMETER

- Explain to student what you are going to do.
- Set up the glucometer. Insert strip with bar code into machine. Check to see the strip number corresponds to the number on the memory on the glucometer.
- Have the student wash their hands, making sure to dry them carefully, to avoid dilution.
- Puncture the finger. Avoid the center of the finger pad. Set up rotating schedule for finger to be poked, for example, odd days for left hand, even for right and pointer finger for Monday, etc.
- Wick blood only strip. Avoid smearing, do not use "old" drop of blood.
- Read and document glucose level.
- Always dispose of glucometer strip without touching the blood, or have student do it.
- Take appropriate action based on the parent/physician orders.**
- Normal: Individual for each child. Refer to physician orders or to parent information.

## HEALTH SERVICES SKILLS CHECKLIST

### MDI (INHALER) USE

- Explain to the student what you are going to do.
- Verify that it is an appropriate time for the medication, and that there is a parental consent signed, along with a physician's order.
- If any of the above are not available or the time is not appropriate, consult your nurse.
- Have student shake the inhaler.
- Take off the cap.
- Attach to spacer/holding chamber if appropriate/available.
- Have student exhale completely
- Hold inhaler appropriately (1-2 inches in front of mouth, directly in mouth or spacer in mouth with lips forming a seal).
- As student starts breathing in slowly, depress the inhaler one time.
- Student will hold breath and count slowly to ten (for some children the nurse or UAP may need to count).
- Have student wait one minute between puffs – have student watch clock.
- Repeat step number 10.
- Replace medication, and document appropriately.
- Be certain to observe student when they come in for the med and after using the inhaler, i.e. breathing pattern, audible wheezing, facial coloring, etc.

**HEALTH SERVICES SKILLS CHECKLIST**  
**NEBULIZER THERAPY**

- Wash hands.
- Explain to student what you are going to do.
- Have the student sitting in an upright, comfortable position.
- Confirm medication order, checking for parental consent, and following medication administration rights.
- Consult nurse as needed prior to giving treatment.
- Connect nebulizer to small bore tubing.
- Assemble medication compartment and mouthpiece as appropriate.
- Place medication in medication cup.
- Turn on machine.
- A fine mist will be present if equipment is properly set-up.
- Student will hold the mouthpiece (or if it's a young or special needs child, UAP may do it for them) and breathe normally throughout the procedure.
- Procedure takes 10-15 minutes, until all the medication is used.
- Clean mouthpiece, and nebulizer according to protocol.
- Document appropriately.
- Refer to product manual for further information.

## HEALTH SERVICES SKILLS CHECKLIST

### PEAK FLOW METER

- Explain to student what you are going to do.
- Use the student's own peak flow meter. If using a school meter, use a disposable mouth piece for each student.
- Move the marker to the bottom of the scale.
- Have student stand up or sit down.
- Have student hold their breath, filling lungs all the way.
- Have student hold their breath while placing the mouthpiece in his/her mouth, between their teeth. The student will close his/her lips around the mouthpiece.
- Have student blow out as hard and fast as they can.
- Repeat the process two more times. The highest of the numbers is the peak flow. This is the number that is recorded.
- Check the student's asthma action card to determine what his/her normal peak flow is and, what if any steps need to be taken this time.
- Review when to use the flow meter: routinely vs. emergency.

## HEALTH SERVICES SKILLS CHECKLIST

### PULSE/Heart Rate

- Consult with your nurse about the need to check a pulse or heart rate.
- Access a watch or clock with a 2<sup>nd</sup> hand.
- Explain to the student what you are going to do.
- Position student's hand and arm so that it is comfortable.
- Place the middle three fingers of your hand on the thumb side of the student's wrist. (DO NOT use your thumb).
- Press gently until you feel the pulse
- Count the pulse for one minute. Remember rhythm will be regular, so report any abnormalities to your nurse.
- Record the pulse and report to your nurse.

<b>Normal ranges:</b>	
Infant:	70-170 per minute
Child:	80-110 per minute
Adult:	60-100 per minute

## HEALTH SERVICES SKILLS CHECKLIST

### RESPIRATIONS

- Consult with your nurse about the need to check respiratory rate.
- Access a watch or clock with a second hand.
- Have the student sit so that you can easily see their chest without being obvious.  
Allow the student calm down before doing this vital sign.
- Watch the chest go up and down for one minute.
- Record and report to your nurse.
- Consider: prior activity. Watch for noisy breathing, blue skin color, and regularity of respirations, very rapid or slow respirations. Share all of this info with the nurse.
- Do this vital sign right after doing the pulse, while still holding on to the person's wrist.

<b>Normal ranges:</b>	
Infant:	25-30 per minute
Child:	20-25 per minute
Adult:	12-20 per minute



## HEALTH SERVICES SKILLS CHECKLIST

### TEMPERATURE

\_\_\_ Explain to student what you are going to do.

\_\_\_ Make sure probe cover is secure. Use a new cover for each temp, even for repeat temps on the same child. DO NOT save & reuse covers.

\_\_\_ ORAL: Place probe under tongue in right or left posterior sublingual pocket not in front under tongue. Have student keep mouth closed without biting probe.

\_\_\_ AXILLARY: Place end of probe in the center of armpit, in direct contact with the skin. Fold the students arm across the chest and hold the thermometer in place.

\_\_\_ TYMPANIC (Ear): Place end of probe in ear: Infants: pull pinna down & back; Children: Pull pinna up and back. Push button on top or back thermometer for 3 seconds and release. DO NOT use in ear that is actively draining.

\_\_\_ Temporal Scanner: Remove protective cap. To ensure lens is clean, wipe with alcohol swab. Hold thermometer in hand. Place probe flat on the center of the forehead. Press and hold the SCAN button. Lightly slide thermometer from center of forehead to hairline; ensure sensor is flat and in contact with skin the entire time (2-3 seconds). You will hear a beep and a red light will blink to indicate a measurement is taking place. If perspiration is present, continue to hold button depressed, lift probe from forehead and touch the neck just behind the ear lobe. Release the SCAN button and remove the thermometer from the head. Read the temperature on the display. Remove from head, read & record temp

\_\_\_ Always hold on to the thermometer, no matter which method is used.

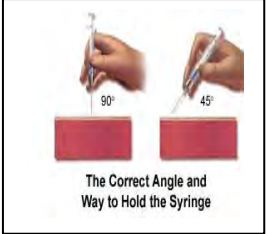


\_\_\_ Always dispose of probe cover in the trash can without touching it.

\_\_\_ Read and record temperature. (Indicate method used if not oral).

\_\_\_ Take appropriate action based on the temperature.

<b>Normal Readings</b>		
<b>Method of reading:</b>	<b>Fahrenheit</b>	<b>Centigrade</b>
Oral	97.0 – 99.0	36.1 – 37.2
Axilla	96.0 – 98.0	35.6 – 36.7
Ear	98.0 - 99.6	36.7 – 37.6
Temporal Scanner	97.4 - 100.1	36.3 - 37.8

## How to Administer SQ (Subcutaneous) Injections

Patient's Age	Site (see illustrations below)	Needle Size	Needle Insertion
Infants (birth to 12 months of age)	Fatty area of the thigh	5/8" to 3/4" needle 23-25 gauge	Insert needle at 45° angle to the skin. Pinch up on SQ tissue to prevent injection into muscle. There is no data to document the necessity of aspiration, however, if performed and blood appears after negative pressure, the needle should be withdrawn and a new site selected. 
Toddlers (12 to 36 months of age)	Fatty area of the thigh or outer aspect of upper arm	5/8" to 3/4" needle 23-25	
Children and adults	Outer aspect of upper arm	5/8" to 3/4" needle 23-25	
 <p>Injection Site Area</p> <p>Correct Place to Give Shot in the Thigh for Children</p>	<p>SQ site for infants and toddlers (birth to 36 months of age)</p> <p>Insert needle at 45° angle into fatty area of anterolateral thigh. Make sure you pinch up on SQ tissue to prevent injection into muscle.</p>	<p>SQ site for toddlers, children and adults</p> <p>Insert need at 45° angle into outer aspect of upper arm. Make sure you pinch up on SQ tissue to prevent injection into</p>	 <p>muscle.</p> <p>Sites on the Body Where a Subcutaneous Injection Can Be Given</p>

## How to Administer IM (Intramuscular) Injections

Patient's Age	Site (see illustrations below)	Needle Size	Needle Insertion
Infants (birth to 12 months of age)	Vastus laterals muscle in anterolateral aspect of middle or upper thigh	7/8" to 1" needle, 23-25 gauge	Use a needle long enough to reach deep into the muscle. Insert needle in an 80° to 90° angle to the skin with a quick thrust. Retain pressure on skin around injection site thumb and index finger while needle is inserted.
Toddlers (12 to 36 months of age)	VAstus laterals muscle preferred until deltoid muscle has developed adequate mass (approximately age 36 months)	7/8" to 1" needle, 23-25 gauge	There is no data to document the necessity of aspiration, however, if performed and blood appears after negative pressure, the needle should be withdrawn and a new site selected* (page 18)
Toddlers (>36 months of age), children and adults	Densest portion of deltoid muscle – above armpit and below acromion	1 " to 2" needle, 23-25 gauge	Multiple injections given in the same extremity should be separated as far as possible (preferably 1" to 1½" with minimum of 1" apart.




\*Red Book 2000, American Academy of Pediatrics

IM Site for infants and toddlers (birth to 36 months of age)

Insert needed at 80-90° angle into vastus lateralis muscle in anterolateral aspect of middle or upper thigh.

IM site for older toddlers, children and adults

Insert the needle at 80-90° angle into densest portion of deltoid muscle – above armpit and below acromion.

		<h2 style="text-align: center;">TRACHEOSTOMY PROCEDURE CHECKLIST</h2>																								
		Health Services <span style="float: right;">Name _____</span>																								
Daily Check List (to be provided by nurse)		Dates:																								
At arrival at school:		M	T	W	T	F	M	T	W	T	F	M	T	W	T	F	M	T	W	T	F	M	T	W	T	F
Meet student. Check for equipment (Ambu bag, obturator, suction catheters)..																										
Check if trach cap is secure																										
Check student's respiratory status																										
Assess ABCs and tracheostomy site (congestion, Velcro ties intact, etc)																										
Suction if necessary																										
Observe color and consistency of mucous																										
Observe respiratory effort																										
Chest expansion																										
Skin Color																										
During the school day:																										
Suction as needed																										
Observe color and consistency of mucous																										
Observe respiratory effort																										
Reposition prn																										
Observe for dust and/or tracheostomy irritants in environment																										
Check respiratory status, color																										
Check on tracheostomy site, ties																										
Comments/Notes:																										
*See nurses's notes (on back)																										
RN/LPN name/initials _____																				12/12/2014						

## **Appendix 2**

**Student Name** \_\_\_\_\_

**School** \_\_\_\_\_

Page 1 of 2

***Request for Specialized Nursing Care Procedure***

Licensed healthcare professional or appropriately qualified unlicensed assistive personnel as deemed competent by a licensed healthcare professional will provide the requested treatment for your child according to written guidelines based on standard and reasonable nursing practice and physician order.

A signed order from the student's health care provider must accompany each parent request. All requests must be renewed at the start of each school year, and whenever there are significant changes in the procedure or the child's condition or needs.

By signing above, the parent/guardian acknowledges that it is the responsibility of parents and guardians to provide the necessary supplies and equipment to the school in order for this procedure to be carried out. Parents and guardians also acknowledge that they are responsible for the cleaning, maintenance, and/or replacement of these materials as needed, or as requested by the school nurse. By signing above, parents and guardians acknowledge that the ordering physician may be contacted by the school nurse for clarification on the procedure requested.

***Please complete the following information and return to the school nurse*** at your child's school. If you have any questions, please do not hesitate to contact the school nurse

**Parent/Guardian Name** \_\_\_\_\_

**Home Phone** \_\_\_\_\_ **Work Phone** \_\_\_\_\_

**Diagnosis or Condition** \_\_\_\_\_

**Procedure/Specialized Care Requested** \_\_\_\_\_

**Reason for the treatment** \_\_\_\_\_

**Requested Time of the treatment** \_\_\_\_\_

**Supplies and/or Equipment required for the treatment (provided by parent/guardian)**

\_\_\_\_\_  
\_\_\_\_\_

**Detailed description of Procedure including Precautions:**

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Physician Signature and Contact Number**

\_\_\_\_\_

**Parent/Guardian Signature** \_\_\_\_\_

**Emergency Name and Contact Number** \_\_\_\_\_

**Date** \_\_\_\_\_

**Student Name** \_\_\_\_\_

**School** \_\_\_\_\_

Page 1 of 2

An outside licensed healthcare professional will provide the requested treatment for your child according to written guidelines based on standard and reasonable nursing practice and physician order.

A signed order from the student's health care provider must accompany each parent request. All requests must be renewed at the start of each school year, and whenever there are significant changes in the procedure or the child's condition or needs.

By signing above, the parent/guardian acknowledges that it is the responsibility of parents and guardians to provide the necessary supplies and equipment to the school in order for this procedure to be carried out. Parents and guardians also acknowledge that they are responsible for the cleaning, maintenance, and/or replacement of these materials as needed, or as requested by the outside licensed healthcare professional or the school nurse. By signing above, parents and guardians acknowledge that the ordering physician may be contacted by the school nurse for clarification on the procedure requested.

Request for Specialized Nursing Care Procedure to be done by an Outside Licensed Healthcare Professional

***Please complete the following information and return to the school nurse*** at your child's school. If you have any questions, please do not hesitate to contact the school nurse

**Parent/Guardian Name** \_\_\_\_\_

**Home Phone** \_\_\_\_\_ **Work Phone** \_\_\_\_\_

**Diagnosis or Condition** \_\_\_\_\_

**Procedure/Specialized Care Requested** \_\_\_\_\_

**Reason for the treatment** \_\_\_\_\_



**Requested Time of the treatment** \_\_\_\_\_

**Supplies and/or Equipment required for the treatment (provided by parent/guardian)**

\_\_\_\_\_

**Detailed description of Procedure including Precautions:**

\_\_\_\_\_

\_\_\_\_\_

**Physician Name and Contact Number**

\_\_\_\_\_

**Emergency Name and Contact Number**

\_\_\_\_\_

**Parent/Guardian Signature** \_\_\_\_\_

**Date** \_\_\_\_\_

**SCHOOL NURSE EMERGENCY ASSESSMENT SHEET**

Name \_\_\_\_\_

School \_\_\_\_\_

Date \_\_\_\_\_ Time \_\_\_\_\_

Complaint \_\_\_\_\_  
\_\_\_\_\_**History**

Past Illness/hospitalization \_\_\_\_\_

State of Health \_\_\_\_\_

Temp \_\_\_\_\_ Pulse \_\_\_\_\_ Respiratory Rate \_\_\_\_\_ Blood Pressure \_\_\_\_\_

Current Medication \_\_\_\_\_

Ill or Injured \_\_\_\_\_

Current Medical treatment \_\_\_\_\_

Last Meal \_\_\_\_\_

Diabetes \_\_\_\_\_

Seizures \_\_\_\_\_

Allergies \_\_\_\_\_

Sleep-last night \_\_\_\_\_

Other:

Date Time Performed by: Outcome Comments



## References

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