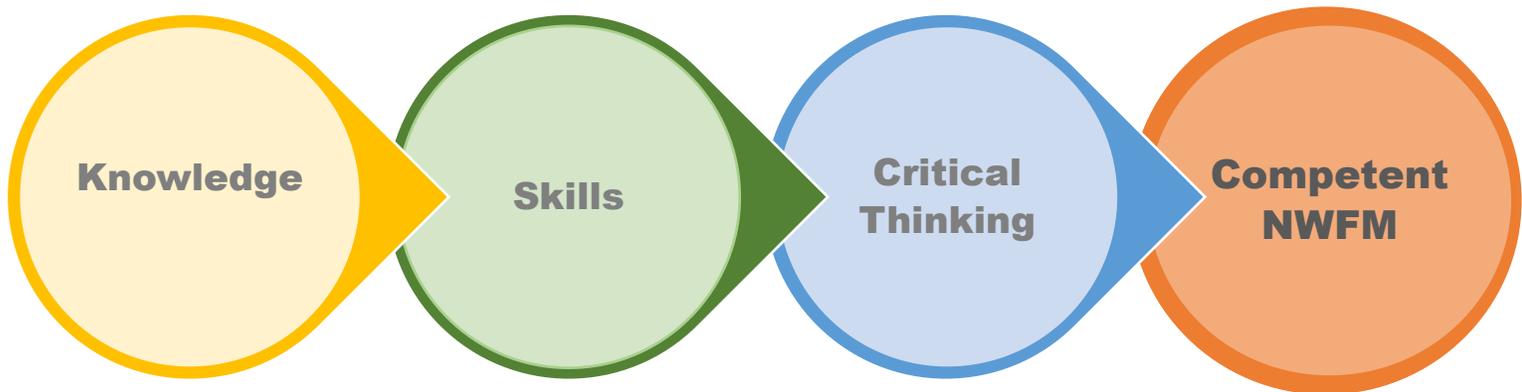


Core Competency Assessments for Department of Public Health (DPH) Nursing Workforce Member (NWFM)



Self-Study Guide

TABLE OF CONTENTS

Introduction/ Competency Assessments

Instructions for Completing Study Guide

Domain 1: Infection Control

Domain 2: Medication Administration

Domain 3: Injection Techniques

Domain 4: Specimen Collection

Skills Demonstration Checklist

Additional Resources/Contact Information

INTRODUCTION

Core competency assessments for the nursing workforce member (NWF) support the delivery of safe, evidence-based, high-quality patient-centered care. In order for the Los Angeles County Department of Public Health (DPH) to achieve its mission to “protect health, prevent disease, and promote health and well-being for all Los Angeles County residents,” clinical core competencies are required for the NWF to effectively perform in clinical and field settings and to respond to public health emergencies.

For purposes of Competency Assessments, NWFs are those individuals whose California State licensing board permits them to administer medications and/or vaccinations. This includes:

- Registered Nurse (RN)
- Nurse Practitioner (NP)
- Licensed Vocational Nurse (LVN)

Pursuant to DPH MD/ND-100, all DPH LCPs must participate in the Department’s ongoing competency assessment and skills validation process. This Self-Study Guide was developed to assist DPH NWFs to comply with this policy. Additional resources for the competency assessments can be found on the Competency Assessments webpage [e.g., Learning Link registration information for testing and skills practice sessions, skills demonstration overview sheets, skills demonstration videos, frequently asked questions (FAQs)]:

<http://intranet.ph.lacounty.gov/ph/Training/LCPbasiccompetencies.htm>

Employee Rights: Refer to MD/ND 100 – Competency Assessment for LCPs
<http://intranet.ph.lacounty.gov/ph/PDFs/PolicyProcedures/MD100.pdf>.
Employees will receive study material at least 30 calendar days before test date. Employees will be allowed time during work hours (reasonable time period shall be arranged with manager/supervisor) to study and practice the skills.

Physical Limitations or Injuries: If NWF has a physical limitation or injury, the NWF will notify his/her/their supervisor/manager and DPH - Human Resources (HR) Return to Work Unit (RTW). HR-RTW will work with employee to determine the accommodations needed. If NWF requires additional assistance, NWF will contact Nursing Administration and/or refer to the Competency Assessment website:
<http://intranet.ph.lacounty.gov/ph/Training/HR/MandatoryTrainingforLicensuredClinicalProfessionals.htm>

Registration/Cancellations:

Core Competency Assessment Testing Sessions will be conducted **online** via the Learning Link: <https://lacounty.csod.com/>.

Competency Assessment Skills Validation Sessions will be conducted **in-person**.
Registration for these sessions will be conducted via the Learning Link:
<https://lacounty.csod.com/>.

Cancelling or rescheduling a Competency Assessment Skills Validation Session can be done via the Learning Link at least **5 calendar days** prior to the skills validation testing session date. If unable to cancel or reschedule a session via the Learning Link, NWFM will contact Nursing Administration for assistance.

In the event of an emergency (e.g., illness, accident, unable to keep scheduled testing day or time) on the day of testing, NWFM will contact Nursing Administration to notify them of absence. If NWFM is unable to contact Nursing Administration due to an emergency, the NWFM's manager or supervisor shall contact Nursing Administration on the NWFM's behalf.

Pursuant to DPH MD/ND-100, failure to participate in the competency assessments as scheduled (e.g., no notification, no show) will be considered a "fail." DPH LCPs will be provided consideration based upon written documentation of extenuating circumstances on a case-by-case basis.

Each employee will be given two (2) opportunities to pass the competency assessment. Failure to pass the competency assessment will result in the following actions:

- a. After failure of an initial assessment, remediation shall be offered to the employee and retesting will be completed after the 6th calendar day. Note: During this time, the workforce member will be restricted from performing duties associated with the competency area not passed during the initial assessment.
- b. After failure of the 2nd attempt (retest/reassessment), a referral will be made to DPH Performance Management which may result in disciplinary action in accordance with Civil Service Rules, Countywide Discipline Guidelines, Employee Evaluation and Discipline Guidelines (EE&DG) and/or departmental guidelines governing progressive discipline.
- c. DPH LCPs who have received disciplinary action must pass competency Assessments immediately following the disciplinary action.
- d. Continued failure to pass assessments will result in referral to DPH HR Performance Management which may result in progressive disciplinary action in accordance with Civil Service Rules, Countywide Discipline Guidelines, EE&DG and/or departmental guidelines governing progressive discipline.

Telephone: 213-288-7725

Email: LCPcompetency@ph.lacounty.gov

INSTRUCTIONS FOR USING THIS SELF-STUDY GUIDE

This document describes how competencies will be assessed in four distinct domains: (1) Infection Control, (2) Medication Administration, (3) Injection Technique, and (4) Specimen Collection. All NWFMs shall follow the steps below to prepare for and demonstrate clinical core competencies.

1. Review the content of each section, including each specific policy referenced.
2. Review competencies to be assessed within each domain.
3. Practice skills as needed to ensure ability to successfully pass the skills demonstration.
4. Review study questions for each domain.

COMPETENCY ASSESSMENTS

Online Examination	Skills Demonstration
<ol style="list-style-type: none"> 1. Infection Control 2. Medication Administration 3. Injection Technique 4. Specimen Collection 	<ol style="list-style-type: none"> 1. Personal Protective Equipment (PPE) Donning and Doffing 2. Nasopharyngeal (NP) Specimen Collection

DOMAIN 1: INFECTION CONTROL

COMPETENCIES:

By the end of this section, participants will be able to:

- Describe the purpose of infection control measures.
- Identify the key concepts in the chain of infection model.
- Identify methods to break the chain of infection.
- Identify actions to prevent or avoid needle stick or sharps injury.
- Identify the steps of respiratory hygiene.
- Demonstrate and verbalize how to correctly don and doff personal protective equipment (PPE).

POLICIES:

[DPH 325 - Hand Hygiene in Healthcare Settings](#)

[DPH 901 - Incident Reporting](#)

[DPH 921 - Aerosol Transmissible Diseases Standard](#)

[MD/ND 102 - Standard Precautions for the Prevention of Infections](#)

PURPOSE OF INFECTION CONTROL:

The purpose of infection control is to reduce the risk of infections occurring in patients, healthcare workers, and visitors. Standard Precautions are the minimum infection control practices that apply to all patient care, regardless of suspected or confirmed infection status of the patient, in any setting where healthcare is delivered, or biological specimens are handled.

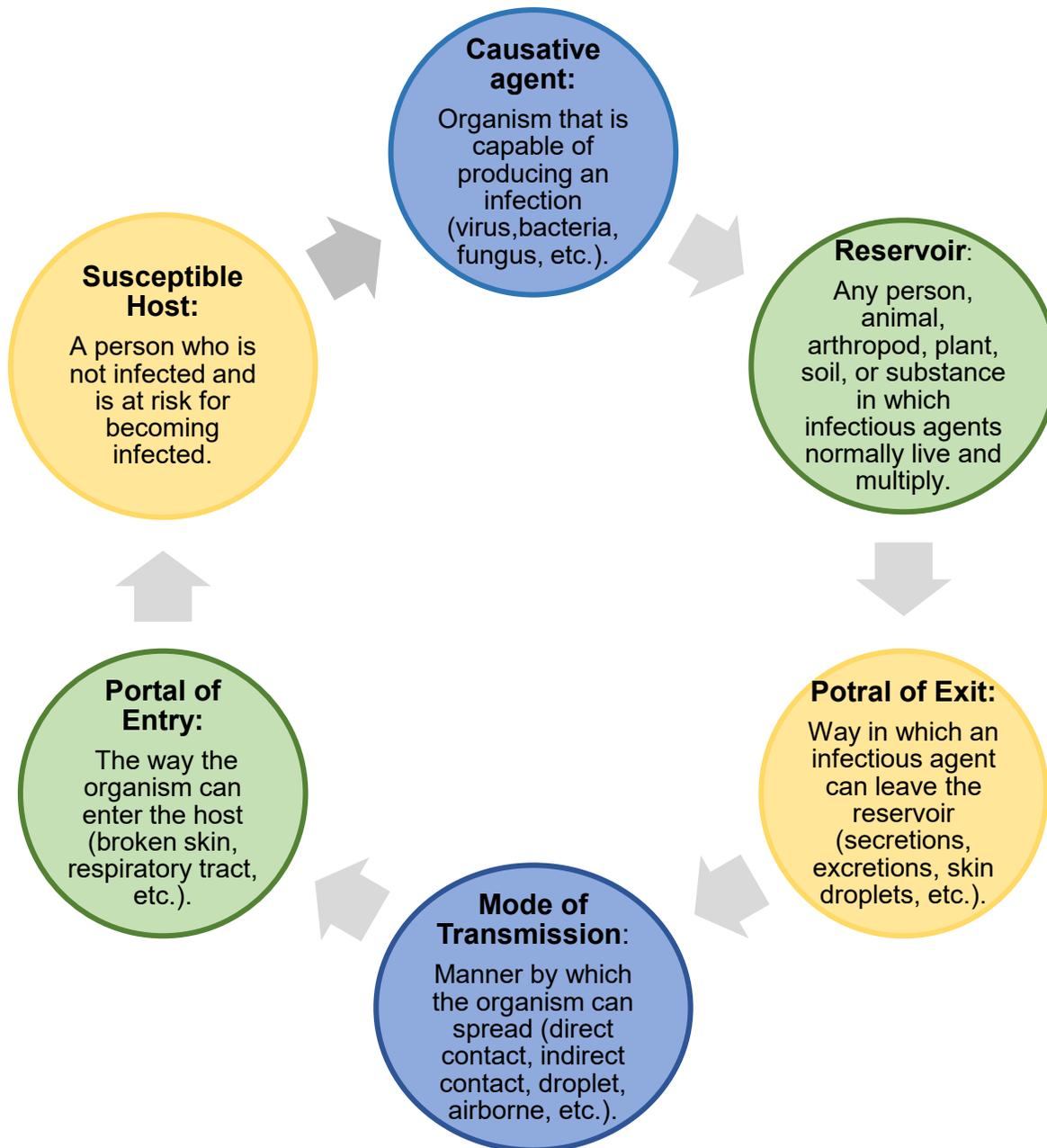
REQUIRED SKILLS:

PERFORMANCE CRITERIA DONNING PPE	MET	NOT MET	COMMENTS
1. Verbalizes performance of hand hygiene for at least 20 seconds.			
2. Verbalizes and demonstrates proper application of gown. <ul style="list-style-type: none">• Fully covers torso and wraps around back.• Fastens gown ties at neck and waist.			
3. Verbalizes and demonstrates proper application of face mask. <ul style="list-style-type: none">• Secures ties or elastic bands (at the middle of the head and neck or around the ears depending on the type of mask being applied).• Fits band to nose bridge and ensures mask is snug to face and below chin.			
4. Verbalizes and demonstrates applying face shield/goggles and adjusts to fit.			
5. Verbalizes and demonstrates proper donning of gloves. <ul style="list-style-type: none">• Gloves cover wrist of isolation gown.			

PERFORMANCE CRITERIA DOFFING PPE	MET	NOT MET	COMMENTS
<p>1. Verbalizes and demonstrates proper removal of gown and gloves.</p> <ul style="list-style-type: none"> • Removes gloves using glove-in-glove technique. • Unties gown straps or breaks ties by pulling gown away from body, folds or rolls the gown inside-out into a bundle, only touching the inside of the gown with bare hands. • Disposes in waste container. • Verbalizes performance of hand hygiene for at least 20 seconds. <p style="text-align: center;">OR</p> <ul style="list-style-type: none"> • Grasps the gown in the front and pulls away from body so that the ties break, touching the outside of the gown only with gloved hands. • While removing the gown, folds or rolls the gown inside-out into a bundle. • While removing the gown, peels off gloves at the same time, only touching the inside of the gloves and gown with bare hands. • Disposes in waste container. • Verbalizes performance of hand hygiene for at least 20 seconds. 			
<p>2. Verbalizes and demonstrates proper removal of goggles.</p> <ul style="list-style-type: none"> • Removes by lifting from the back earpiece without touching the front of the face shield/goggles. • Disposes in waste container. 			
<p>3. Demonstrates proper removal of mask.</p> <ul style="list-style-type: none"> • Grasps mask ties/elastic bands of the mask and removes mask without touching the front of the mask. • Disposes of mask in the waste container. 			
<p>4. Verbalizes performance of hand hygiene for at least 20 seconds.</p>			

REQUIRED KNOWLEDGE:

I. Chain of Infection



II. General Infection Control Measures

Standard precautions are the **minimum** infection control practices that apply to all patient care, regardless of suspected or confirmed infection status of the patient, in any setting where healthcare is delivered. These practices are designed to both protect healthcare providers and prevent the spread of infection.

Standard Precautions include:

- a. Hand hygiene
- b. Use of PPE
- c. Safe injection practices
- d. Safe handling of potentially contaminated equipment or surfaces in the patient environment
- e. Respiratory hygiene/cough etiquette

III. Hand Hygiene

Hand hygiene is the most important measure in reducing the spread of microorganisms from person-to-person and from person-to-environment.

1. Wash your hands for at least 20 seconds.
2. Soap and water should be used when bare hands are visibly soiled (e.g., blood, body fluids) or after caring for a patient with known or suspected diarrhea (e.g., *Clostridium difficile* or norovirus). In all other situations, alcohol-based hand rub that contains at least 60% alcohol may be used. When using alcohol-based hand sanitizer, put product on your hands and rub hands together vigorously. Cover all surfaces until hands feel dry. This should take around 20 seconds.
3. Key situations when hand hygiene should be performed include:
 - a. Before and after touching a patient, even when gloves are worn.
 - b. Before exiting a patient's care area after touching the patient or the patient's immediate environment.
 - c. After contact with blood, body fluids, excretions, or wound dressings.
 - d. Prior to performing an aseptic task (e.g., preparing an injection).
 - e. If hands will be moving from a contaminated body site (e.g., mucous membranes, anogenital, wound) to clean body site (e.g., dry, intact skin) during patient care.
 - f. After glove removal.

IV. Personal Protective Equipment (PPE)

Personal Protective Equipment (PPE) is wearable equipment that is intended to protect healthcare personnel and the public from exposure to or contact with infectious agents (e.g., gown, mask or respirator, goggles or face shield, and gloves).

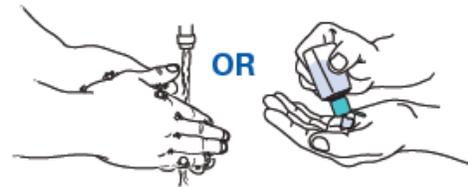
1. The type of PPE used will vary based on the level of precautions required, such as standard, contact, droplet or airborne infection isolation precautions.
2. The guidelines for donning/doffing PPE are best practices set forth by the Centers for Disease Control and Prevention (CDC) and The California Division of Occupational Safety and Health (Cal OSHA) to protect healthcare workers from contact with blood, body fluids, and other

- potentially infectious material.
3. The NWFM shall adhere to the manufacturer's recommendations for the selected PPE (i.e., 3M).
 4. Disposable PPE is designed to be used only one time and by one person. The protective capabilities of single use PPE cannot be assured when it is reused by the same person or used by more than one person.
 - a. During critical PPE shortages due to emergency events (i.e., COVID-19 pandemic) guidelines for PPE extended use or reuse may be implemented.
 5. The selection of PPE is based on the nature of the patient interaction and potential for exposure to blood, body fluids, infectious agents, chemical and/or other hazardous materials.
 - a. Surgical mask vs. Respirator:
 - i. A respirator is designed to protect the wearer from inhaling airborne contaminants (i.e., infectious agents associated with inhaling small and large particle droplets).
 - ii. A surgical mask provides barrier protection against large-particle droplets and does not effectively filter inhaled small particles, fumes, or vapors. A surgical mask is primarily used to protect patients and healthcare workers from people who may have a respiratory infection.
 6. When utilizing PPE, use safe work practices to protect yourself and limit the spread of contamination.
 - a. Keep hands away from face
 - b. Limit surfaces touched
 - c. Change gloves when torn or contaminated
 - d. Perform hand hygiene
 7. When disposing of PPE, it shall be placed in an appropriate waste container for disposal (e.g., biohazard waste container, trash container).
 8. PPE Donning and Doffing:
 - a. Donning (putting on) PPE: if more than one item of PPE is needed, don items in the following order.

Donning

1. Hand Hygiene:

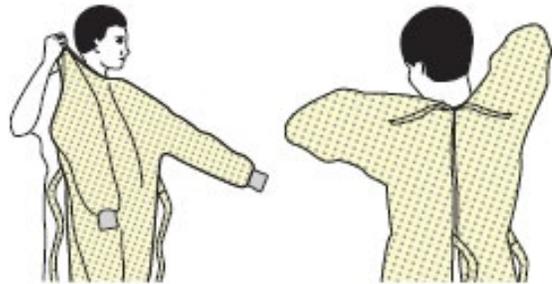
Performs hand hygiene for at least 20 seconds or uses an alcohol-based hand sanitizer (for 20 seconds) before donning PPE.



2. Gown:

Provides a barrier to prevent clothes and skin underneath from becoming exposed to body fluid splash.

- i. Fully covers torso from neck to knees, arms to end of wrists, and wrap around the back.
- ii. Fastens in the back of the neck and waist.



3. Mask or Respirator (i.e., N95 mask)

Provides wearer with an air filter protecting mucous membranes of nose and mouth.

- i. Secure ties or elastic bands at the middle of the head and neck or behind the ears.
- ii. Fits flexible band to bridge of nose.
- iii. Fits snug to face and below chin.
- iv. Fit-check mask/respirator.



4. Goggles or Face Shield

Provides a physical barrier that can be seen through but prevents exposure to body fluids to face.

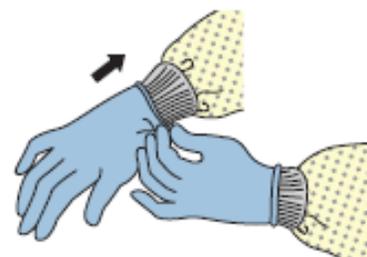
- i. Places over face and eyes and adjusts to fit.



5. Gloves

Provides a protective barrier to hands and forearms.

- i. Extends gloves to cover wrists (gloves should cover wrist of isolation gown)



<https://www.cdc.gov/hai/pdfs/ppe/PPE-Sequence.pdf>

- b. Doffing (removal) of PPE: There are a variety of ways to safely remove PPE without contaminating your clothing, skin, or mucous membranes with potentially infectious materials. The following are two ways in which PPE can be safely removed.

Note: The front of the mask, gown, goggles, and outside of each glove is contaminated! If your hands get contaminated during gown, mask, goggles, and/or glove removal, immediately wash your hands (20 seconds) or use an alcohol-based hand sanitizer (for 20 seconds).

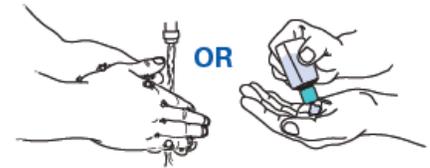
Doffing Method Example 1

<p>1. Gloves:</p> <ul style="list-style-type: none"> i. Using the gloved hand, grasp the palm area of the other gloved hand and peels off first glove. ii. Holds removed glove in gloved hand. iii. Slides fingers of ungloved hand under the wrist of the remaining glove. Peels off second glove over first glove. iv. Discards glove in waste container. 	
<p>2. Gown:</p> <ul style="list-style-type: none"> i. Unfastens gown ties, taking care that sleeves don't contact your body when reaching for ties. ii. Pulls gown away from neck and shoulders, touching inside of gown only. iii. Turns gown inside out. iv. Folds or rolls into a bundle and discard in a waste container. 	
<p>3. Hand Hygiene:</p> <ul style="list-style-type: none"> i. Performs hand hygiene for at least 20 seconds or use an alcohol-based hand sanitizer (for 20 seconds). 	
<p>4. Goggles or Face shield:</p> <ul style="list-style-type: none"> i. Removes goggles or face shield from the back by lifting head band or earpieces carefully removing without touching the front of the goggles or face shield. ii. Places in designated receptacles for reprocessing or in waste container. 	
<p>5. Mask or Respirator:</p> <ul style="list-style-type: none"> i. Grasps bottom ties or elastics of the mask/respirator, then the ones at the top, and removes without touching the front. ii. Discards in waste container. 	

6. Hand Hygiene:

- i. Performs hand hygiene for at least 20 seconds or uses an alcohol-based hand sanitizer (for 20 seconds) immediately after removing all PPE.

https://www.cdc.gov/coronavirus/2019-ncov/downloads/A_FS_HCP_COVID19_PPE.pdf



Doffing Method Example 2

1. Gown and Gloves

- i. Grasps the gown in the front and pull away from your body so that the ties break, touching outside of gown only with gloved hands.
- ii. While removing the gown, folds or rolls the gown inside-out into a bundle.
- iii. While removing the gown, peels off gloves at the same time, only touching the inside of the gloves and gown with bare hands. Places the gown and gloves into a waste container.



2. Goggles or Face Shield

- i. Removes goggles or face shield from the back by lifting head band or earpieces carefully removing without touching the front of the goggles or face shield.
- ii. Places in designated receptacles for reprocessing or in waste container.



3. Mask or Respirator

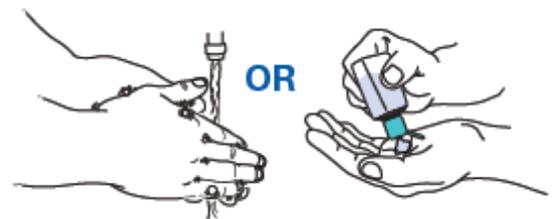
- i. Grasps bottom ties or elastics of the mask/respirator, then the ones at the top, and remove without touching the front.
- ii. Discards in waste container.



4. Hand Hygiene:

- i. Performs hand hygiene for at least 20 seconds or uses an alcohol-based hand sanitizer for at least 20 seconds immediately after removing all PPE.

<https://www.cdc.gov/hai/pdfs/ppe/ppe-sequence.pdf>



V. Safe Injection Practices

Safe injection practices are part of Standard Precautions and are aimed at maintaining basic levels of patient safety and provider protections. Safe injection practices are intended to prevent transmission of infectious diseases between

one patient and another, or between a patient and NWFM during preparation and injection of medications. Adhere to the following guidance:

1. Only NWFM with an appropriate scope of practice may administer injections.
2. Use aseptic technique when preparing and administering medications.
3. Cleanse the access diaphragms of medication vials with alcohol before inserting a device into the vial.
4. **Never** administer medications from the same syringe to multiple patients, even if the needle is changed.
5. Do **not** reuse a syringe to enter a medication vial or solution.
6. Do **not** administer medications from single-dose containers (e.g., vials, ampules, bags or bottles) to more than one patient.
7. Do **not** use fluid infusion or administration sets (e.g., intravenous tubing) for more than one patient.
8. Multidose vials:
 - a. Dedicate multidose vials to single patients whenever possible.
 - i. If multidose vials are to be used for more than one patient, they should be restricted to a centralized medication area and should **not** enter the immediate patient treatment area.
 - b. Assure that multidose vials are dated and signed when opened.
 - c. Are to be discarded at time of expiration or not later than **28 days** after first use unless the manufacturer specifies otherwise (shorter or longer).
 - i. Vaccines are exempted from the 28-day requirement and are to be discarded per the manufacturer's expiration date.
9. Needles:
 - a. Safety devices on needles should be activated immediately after use.
 - b. Used needles should **not** be recapped, bent, cut, removed from the syringe, or otherwise manipulated.
 - c. Dispose used syringes and needles immediately at the point of use in a sharps container that is closable, puncture-resistant, and leak-proof. Do **not** overfill sharps containers.
10. Adhere to federal and state requirements for protection of NWFM from exposure to bloodborne pathogens.

VI. **Safe handling of potentially contaminated equipment or surfaces in the patient environment**

Environmental Cleaning refers to the removal of visible soil and organic contamination from a device or environmental surface using the physical action of scrubbing with a surfactant or detergent and water, or an energy-based process (e.g., ultrasonic cleaners) with appropriate chemical agents. This process removes large numbers of microorganisms from surfaces and must always precede disinfection.

Sterilization describes a process that destroys or eliminates all forms of microbial life and is carried out in health-care facilities by physical or chemical methods. Steam under pressure, dry heat, ethylene oxide (EtO) gas, hydrogen peroxide gas plasma, and liquid chemicals are the principal sterilizing agents used in healthcare facilities.

Disinfection is generally a less lethal process of microbial inactivation (compared to sterilization) that eliminates virtually all recognized pathogenic microorganisms except certain spore-forming bacteria (e.g., *Clostridium* and *Bacillus* species). Emphasis for cleaning and disinfection should be placed on surfaces that are most likely to become contaminated with pathogens, including those in close proximity to the patient (e.g., examination tables) and frequently touched surfaces in the patient-care environment (e.g., doorknobs).

Responsibility for routine cleaning and disinfection of environmental surfaces should be assigned to appropriately trained staff. Cleaning procedures can be periodically monitored or assessed to ensure that they are consistently and correctly performed. Environmental Protection Agency (EPA)-registered disinfectants or detergents/disinfectants with label claims for use in healthcare should be selected for disinfection. Disinfectant products should not be used as cleaners unless the label indicates the product is suitable for such use. Staff should follow manufacturer's recommendations for use of products selected for cleaning and disinfection (e.g., amount, dilution, contact time, safe use, and disposal).

Adhere to the following guidance:

1. Facilities shall establish policies and procedures for routine cleaning and disinfection of environmental surfaces in ambulatory care settings. Focus on those surfaces in proximity to the patient and those that are frequently touched.
2. Select EPA-registered disinfectants or detergents with label claims for use in healthcare.
3. Follow manufacturer's recommendations for use of cleaners and EPA-registered disinfectants (e.g., amount, dilution, contact time, safe use, and disposal).
4. For more information, refer to CDC "Guideline for Disinfection and Sterilization in Healthcare Facilities, 2008" at:
http://www.cdc.gov/hicpac/pdf/guidelines/Disinfection_Nov_2008.pdf

Medical equipment is labeled by the manufacturer as either reusable or single-use. Single-use devices **may not** be reprocessed (disinfection or sterilization). Reusable medical equipment must be cleaned and maintained according to manufacturer's instructions to prevent patient-to-patient transmission of infectious agents. Manufacturer's instructions for reprocessing any reusable medical equipment (including point-of-care devices, such as blood glucose meters) should

be readily available and used. Instructions should be posted at the site where equipment reprocessing occurs.

Adhere to the following guidance:

1. Facilities shall ensure that reusable medical equipment is appropriately cleaned, reprocessed, and maintained according to the manufacturer's instructions prior to use on another patient. Single-use devices are not reusable and should be disposed of properly.
2. Responsibilities for reprocessing of reusable medical equipment shall be assigned to staff with appropriate training. Competencies shall be documented for equipment reprocessing and shall be conducted upon assignment of such duties, whenever new equipment is introduced, and on an ongoing periodic basis (e.g., semi-annually).
3. Staff shall have access to proper personal protective equipment (PPE) when handling and reprocessing contaminated patient equipment.

VII. Respiratory hygiene/Cough etiquette

To prevent the transmission of respiratory infections in healthcare settings, infection control measures should be implemented at the first point of contact with a potentially infected person. The following measures to contain respiratory secretions are recommended for all individuals with signs and symptoms of a respiratory infection.

- Cover your mouth and nose with a tissue when coughing or sneezing.
- Use the nearest waste receptacle to dispose of the tissue after use.
- Perform hand hygiene using soap and water for at least 20 seconds or use an alcohol-based hand rub that contains at least 60% alcohol for at least 20 seconds after having contact with respiratory secretions and contaminated objects/materials.

Healthcare facilities should implement measures to prevent the spread of respiratory infections from anyone in a healthcare setting with signs or symptoms and ensure the availability of materials for adhering to Respiratory Hygiene/Cough Etiquette in waiting areas for patients and visitors.

- Provide tissues and no-touch receptacles for used tissue disposal.
- Provide conveniently located dispensers of alcohol-based hand rub; where sinks are available, ensure that supplies for hand washing (i.e., soap, disposable towels) are consistently available.
- Post signs at entrances asking patients with symptoms of respiratory infection to:
 - Cover your mouth and nose when coughing or sneezing.
 - Use tissues and throw them away.
 - Wash your hands or use a hand sanitizer every time you touch your mouth or nose.
- Provide resources for performing hand hygiene in or near waiting areas.
- Offer masks to symptomatic patients when they enter the healthcare setting.

- Provide space and encourage symptomatic patients to sit as far away from others as possible. Facilities may wish to place these patients in a separate area, if available, while waiting for care.

Domain 1: Infection Control Sample Test Questions

1. When donning more than one item of PPE, the following order should be followed:
 - a. Goggles, mask, gown, gloves
 - b. Mask, gown, gloves, goggles
 - c. Gown, mask, goggles, gloves
 - d. Gown, mask, gloves, goggles
2. The portal of entry is the way in which an infectious agent can leave the reservoir.
 - a. True
 - b. False
3. Which is not a key agent in the chain of infection model:
 - a. Susceptible host
 - b. Mode of medication administration
 - c. Causative agent
 - d. Reservoir
 - e. Portal of exit
4. Key situations in which hand hygiene should be performed include:
 - a. After glove removal.
 - b. After contact with blood, body fluid, excretions, or wound dressings.
 - c. Before and after touching a patient, even when gloves are worn.
 - d. Prior to performing an aseptic task (e.g., preparing an injection).
 - e. All of the above.
5. Standard Precautions include all of the following EXCEPT:
 - a. Hand hygiene
 - b. Safe injection practices
 - c. Use of PPE
 - d. Use of a PAPR (Powered Air Purifying Respirator)
 - e. Respiratory hygiene/cough etiquette

Answers: 1c, 2b, 3b, 4e, 5d

DOMAIN 2: MEDICATION ADMINISTRATION

COMPETENCIES:

Upon completion of this section, participants will be able to:

- Recall the seven “Rights of Medication Administration.”
- Indicate how to assess for allergies and contraindications for medications.
- Demonstrate how to calculate the appropriate medication dosage for an adult using D/H x Q.
- Identify two methods used to prevent sharps and needle stick injuries.
- Demonstrate and identify metric equivalents.
- Describe proper medication administration techniques via different routes (e.g., Oral, Intradermal, and Subcutaneous).
- Describe proper injection techniques.
- Identify key components of documentation.
- Identify how to report and document medication errors.

POLICIES:

[CHS 915 - University Health Center Consortium \(UHC\) Safety Intelligence \(SI\) Event Reporting](#)

[DPH 325 - Hand Hygiene in Healthcare Settings](#)

[DPH 901 - Incident Reporting](#)

[MD/ND 101 - Patient Identity Verification \(Prior to Providing Healthcare Services\)](#)

[MD/ND 102 - Standard Precautions for the Prevention of Infections](#)

[MD/ND 113 - Administration of Medications, Including Vaccinations](#)

[MD/ND 118 - Management of Anaphylaxis](#)

[MD/ND 121 - Medical Records Documentation](#)

[MD/ND 402 - RN Standardized Procedure - Management of Anaphylaxis](#)

[MD/ND 403 - LVN Standing Order - Response to Anaphylaxis](#)

PURPOSE OF ACCURATE MEDICATION ADMINISTRATION:

Medications are administered to treat specific health conditions and to maintain and improve an individual’s quality of life. If an error is made during the administration process, it could be detrimental to the patient’s well-being. To protect patients, the NWFMM must make every effort to ensure that medication is administered and documented accurately as per MD/ND 113 Administration of Medications, including Vaccinations. Errors in medication administration must be documented per DPH 901 Incident Reporting.

REQUIRED KNOWLEDGE:

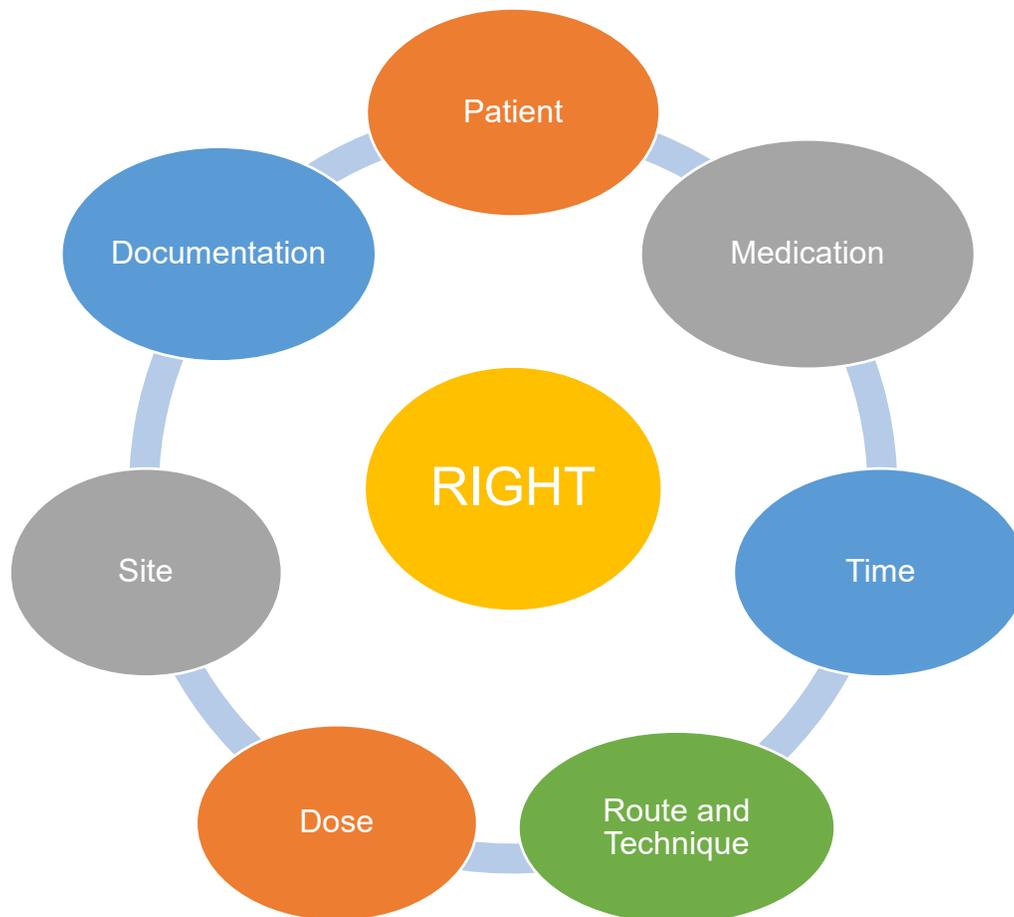
I. Standard Precautions

- 1. Hand hygiene
- 2. Prevention of sharps or needle stick injuries
 - a. Do not re-use needles or recap needles by hand.
 - b. Do not shear or break contaminated needles.
 - c. Do not place needles in regular trash and do not overfill sharps container.
 - i. Sharps must not be filled above the fill line. The fill line is the manufacturer’s mark on the sharps bin that relates to the bin being $\frac{3}{4}$ full.
 - d. Do not pass needles from one hand to another hand.
 - e. If the needle has a safety device, activate it before disposal in the sharps container.



II. Utilize the Seven “Rights of Medication Administration”

NWFMs are responsible for utilizing all seven Rights of Medication Administration when administering medications as per MD/ND- 113 Medical Administration, including vaccinations.



1. Right Patient	<ul style="list-style-type: none"> Ensure the RIGHT patient by utilizing two identification methods (e.g., name, DOB) per MD/ND-101 Patient Identity Verification (Prior to Providing Healthcare Services). 	
2. Right Medication	<ul style="list-style-type: none"> Ensure the RIGHT medication is administered. Check the medication label at least three times: <ul style="list-style-type: none"> When removing the medication from the medication drawer When comparing the medication label with the medication order. Prior to administration to the patient. Assess for drug allergies and risk for adverse drug reaction. Look up the medication if it is unfamiliar. Notify the ordering licensed practitioner (LP) if ordered medication is not available or must be substituted. Check the expiration date of the medication. Never use medication past its expiration date. 	<ul style="list-style-type: none"> For multi-dose vials: <ul style="list-style-type: none"> It is important to write the date and time the vial is first opened. For vaccines, the vial can continue to be used until the printed manufacturer's expiration date, even if this date extends more than 28 days beyond the date the vial was opened. For medications other than vaccines, the vial must be discarded after 28 days from date opened or when the vial reaches the manufacturer's expiration date, whichever occurs first.
3. Right Time	<ul style="list-style-type: none"> Ensure the medication is administered at the RIGHT interval (date/time). 	
4. Right Dosage	<ul style="list-style-type: none"> Ensure the dose ordered is the RIGHT dose administered to patient. Verify that the dose ordered is clearly stated. Verify that the dose is within the recommended range for the patient's age and weight. When reconstituting or mixing medications, follow instructions provided by the manufacturer. If you need to calculate the dose, always double check your calculations. 	
5. Right Route and Technique	<ul style="list-style-type: none"> Ensure to use the RIGHT route and technique by cross-referencing the LP's order with the information provided by the manufacturer for route and technique. Identify any contraindication to route prescribed (e.g., ability to swallow or the medication can only be administered via a particular route). 	
6. Right Site	<p>Ensure the RIGHT site by assuring that the anatomical location of medication administration is in accordance with the LP's order, information provided by the manufacturer, and if possible, patient preference.</p>	
7. Right Documentation	<ul style="list-style-type: none"> Ensure RIGHT documentation Document all medications administered per MD/ND 121- Medical Records Documentation: <ol style="list-style-type: none"> All documentation should include: <ol style="list-style-type: none"> Patient's name and medical record number Exact date and time of administration Name of medication Dosage Site Route Name and title of NWFM who administered medication For vaccines, include manufacturer's lot number 	<ul style="list-style-type: none"> Document any required preliminary steps that must be done prior to giving the medication (e.g., pulse, blood pressure, available laboratory values). Document any side effects and all nursing interventions implemented to address the side effects <ol style="list-style-type: none"> Per MD/ND 118 - Management of Anaphylaxis, MD/ND 402 - RN Standardized Procedure - Management of Anaphylaxis, and MD/ND 403 - LVN Standing Order - Response to Anaphylaxis

III. Calculation of Dosage

1. Definition

D= Desired dose (e.g., amount ordered by licensed practitioners)

H= Dose on hand

Q= Form and amount in which drug comes (e.g., 1 tablet, 5 cc, etc.)

2. $\frac{D}{H} \times Q$ = Amount to be given

- a. Example: MD orders 500 mg of Ibuprofen for a patient (D) and you have Ibuprofen at 250 mg (H) per tablet (Q). How many tablets do you give?

$$\frac{(D) 500 \text{ mg}}{(H) 250 \text{ mg}} \times (Q) 1 \text{ tablet} = 2 \text{ tablets}$$

- b. Example: MD orders 250 mg of Ceftriaxone for a patient (D) and you have 500 mg (H) per 5 cc (Q). How many cc's do you give?

$$\frac{(D) 250 \text{ mg}}{(H) 500 \text{ mg}} \times (Q) 5 \text{ cc} = 2.5 \text{ cc}$$

IV. Metric Equivalents

1. Weight

1 kilogram (kg)	=	1,000 grams (g)
1 gram (g)	=	1,000 milligrams (mg)
1 milligram	=	1,000 micrograms

2. Volume

1 liter (L)	=	1,000 milliliters (mL) or
	=	1,000 cubic centimeters (cc)
1 milliliter (mL)	=	1 cubic centimeter (cc)

V. Medication Administration Procedure

1. Verify the LP's order.
 - a. The NWFM must identify the classification/action, indications, usual dosage, route, side effects, contraindications, and nursing implications of all medications administered.
 - i. Refer to current and appropriate references for drug information (e.g., pharmacy, drug inserts, and drug reference books).
2. Gather medication and equipment.
3. Go through the seven "Rights of Medication Administration" per MD/ND 113 - Administration of Medications, Including Vaccinations.
4. Verify the patient's identity per MD/ND 101 - Patient Identity Verification (Prior to Providing Healthcare Services).
 - a. If the patient is a minor, verify the patient's identity with the parent/guardian.
5. Explain purpose of medication and procedure to patient or parent/guardian.
6. Assess for allergies and any contraindications.
7. Wash hands (at least 20 seconds) or, if in the field, use hand sanitizer (for at least 20 seconds).
8. Perform any assessments necessary for the specific medication being administered prior to administration (e.g., blood pressure, pulse rate).
 - a. When administering injections, assess injection site for any contraindications (e.g., infection, dialysis shunt) and assess for patient's anatomical preference.
9. Administer medication.
 - a. **Never** leave medication unattended.
 - b. Oral medication
 - i. Place medication in a medicine cup.
 - ii. Never directly touch tablets or capsules with your fingers to ensure cleanliness of the medication.
 - iii. For unit-dose medications, do not remove the medication from the wrapper.
 - iv. For liquid medications, place the medication cup on a flat surface, pour the medication to the desired level and bring up to eye level to verify dosage.
 - v. For doses less than 10 mL, use a syringe (without an attached needle) to draw up the correct dose.
 - vi. Provide the patient a cup of water (unless contraindicated) to take with his/her medication.
 - vii. Discard any medication that falls on any contaminated surface (e.g., the floor) and replace it with a new one.
 - viii. Observe patient taking medication.
 - ix. Ask the patient to open his or her mouth to verify the medication has been properly ingested.

VI. Medication disposal

Expired, contaminated, or excess medication must be properly disposed per protocol.

1. In clinical settings, medication shall be disposed as follows:
 - a. Pill or capsule: Dispose into a pharmaceutical waste container or in sharps medication waste container.
 - b. Liquid: Place into resealable plastic bag and dispose in pharmaceutical waste container.
 - c. Medication in a syringe: Dispose syringe with medication in the sharps pharmaceutical waste container.
2. In a field setting, the NWFM shall put the medication in a resealable plastic bag and return the medication to a health center for disposal in a pharmaceutical waste container.



VII. Anaphylaxis

Anaphylaxis is an acute life-threatening response with varied clinical presentations. Respiratory compromise and cardiovascular collapse cause the most concerns because they are the most frequent cause of fatalities. The more rapidly anaphylaxis occurs after exposure to an offending stimulus, the more likely the reaction is to be severe and potentially life-threatening.

1. Signs & Symptoms
 - a. Signs and symptoms may be **mild to moderate** or **severe** and can occur as quickly as 1 to 30 minutes after an exposure to the offending stimulus. Symptoms can also recur 4-12 hours after the initial reaction.

Mild to Moderate	<ul style="list-style-type: none"> • Rash • Hives (especially over neck and face) • Itching • Nasal congestion • Watery red eyes
Severe	<ul style="list-style-type: none"> • <u>Neurological</u>: altered levels of consciousness, lightheadedness, headache, feeling of impending doom, anxiety, dilated pupils • <u>Cardiovascular</u>: hypotension with or without syncope, rapid, weak or irregular pulse. Note: Tachycardia is the rule in anaphylaxis, but it may be absent in patients with conduction defects. • <u>Respiratory</u>: wheezing, sneezing, coughing, hoarseness or shortness of breath, signs of complete or partial upper airway obstruction, severe asthma attack, edema of uvula and glottis • <u>Skin</u>: localized or diffuse erythema, pruritus, urticaria, edema, flushing, angioedema • <u>Gastrointestinal</u>: nausea, vomiting, diarrhea • <u>Musculoskeletal</u>: uterine or abdominal cramping

2. NWFMM Responsibilities:

- a. In a field setting where medication is being administered, the NWFMM shall ensure an emergency or anaphylaxis kit (e.g., red box) is available.
- b. Anaphylaxis response:
 - i. Dial 911 for paramedics and follow facility's emergency procedure(s).
 - ii. Assess circulation, airway, breathing, and level of consciousness.
 - iii. Administer medication for the treatment of anaphylaxis. (See MD/ND 113 - Administration of Medications, including Vaccinations for appropriate administration and dosage of epinephrine, MD/ND 118 - Management of Anaphylaxis, MD/ND 402 - RN Standardized Procedure- Management of Anaphylaxis, & MD/ND 403 - LVN Standing Order - Response to Anaphylaxis).
 - iv. Provide Basic Life Support (BLS) and first aid if needed.
 - v. Monitor vital signs.
 - vi. At clinical sites, administer oxygen to patient at 5-10 liters per minute via face mask, if available.
 - vii. Continue assessing and monitoring patient's vitals until arrival of paramedics or physician.
 - viii. Open a medical record on the patient if one does not exist.
 - ix. Document incident in the medical record and on the Anaphylaxis Reactions Emergency Worksheet
 - x. If a vaccine was the trigger, report adverse reaction(s) to the Vaccine Adverse Events Reporting System (VAERS) via mail, FAX, or internet (<http://vaers.hhs.gov/index>).
 - xi. Report incident to supervisor and follow CHS 915 - University Health System Consortium (UHC) Safety Intelligence (SI) Event

Reporting.

Epinephrine Dosage	
Adult	0.30 - 0.50 mg/dose (0.30 - 0.50 mL) aqueous solution of epinephrine hydrochloride 1:1000 IM
Child	0.01 mg/kg body weight aqueous solution of epinephrine hydrochloride 1:1000 IM (maximum dose per injection: 0.50 mg)

VIII. Medication Errors

1. Report any medication error to the prescribing practitioner immediately.
2. Report incident to the University Health System Consortium Safety Intelligence via intranet <http://intranet/ph/SpecialProjects/UHC/UHC.htm>

IX. Online Documentation for Immunizations

1. The California Immunization Registry (CAIR) is a secure, confidential, statewide computerized immunization information system for California residents.
2. Provide the "CAIR Notice to Patients and Parents" letter to patient or parent/guardian and note acceptance or declination of sharing information in CAIR system.
3. Document in CAIR
 - a. Demographic information
 - b. Vaccine history if available
 - c. Date Vaccine Information Statement (VIS) was provided (system automatically provides).
 - d. Date vaccination was administered
 - e. Lot number(s) of vaccine
 - f. Administration site
 - g. Dosage(s)
 - h. Name and title of NWFM administering medication(s)

Domain 2: Medication Administration Sample Test Questions

1. In utilizing the 7 “Rights of Medication Administration” when administering vaccines from multi-dose vials, the vial cannot be used beyond the 28 days of the date the vial was opened/punctured.
 - a. True
 - b. False
2. Signs and symptoms of anaphylaxis can recur 4-12 hours after the initial reaction.
 - a. True
 - b. False
3. Which is **NOT** one of the 7 “Rights of Medication Administration”?
 - a. Right route and technique
 - b. Right time
 - c. Right dosage
 - d. Right documentation
 - e. Right nurse
4. Which is the correct metric conversion for:
1 gram = ____ mg
 - a. 10
 - b. 0.10
 - c. 100
 - d. 1000
5. Documentation of immunizations is done online in the California Immunization Registry (CAIR) system.
 - a. True
 - b. False

Answers: 1b, 2a, 3e, 4d, 5a

DOMAIN 3: INJECTION TECHNIQUES

COMPETENCIES:

Upon completion of this section, participants will be able to:

- Identify the correct anatomical location for intramuscular, subcutaneous, and intradermal injections for infants, children, and adults.
- Identify the correct needle size (length and gauge) to administer intramuscular, subcutaneous, and intradermal injections.
- Recall the maximum amount of fluid that can be injected into a patient in a single intramuscular, subcutaneous, or intradermal injection.
- Recall the proper injection angles for intramuscular, subcutaneous, and intradermal medication administration.
- Identify how to properly dispose of needles and syringes in sharps container.

POLICIES:

[CHS 915 - University Health System Consortium \(UHC\) Safety Intelligence \(SI\) event Reporting](#)

[DPH 325 - Hand Hygiene in Healthcare Settings](#)

[DPH 901- Incident Reporting](#)

[MD/ND 101 - Patient Identity Verification \(Prior to Providing Healthcare Services\)](#)

[MD/ND 102 - Standard Precautions for the Prevention of Infections](#)

[MD/ND 113 - Administration of Medications, Including Vaccinations](#)

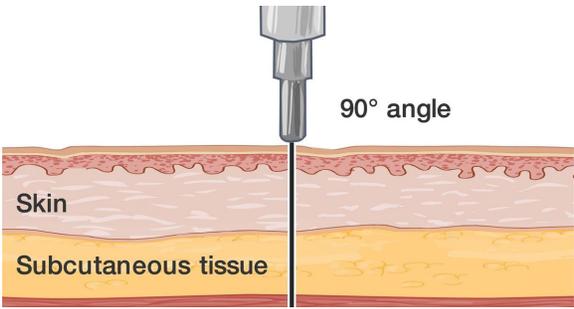
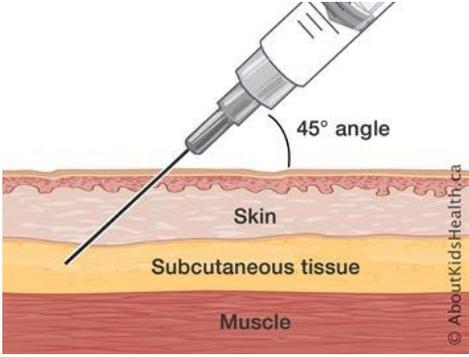
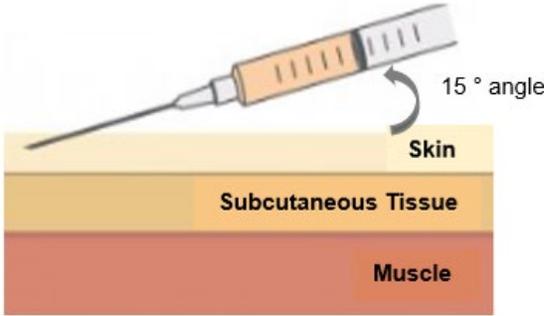
[MD/ND 121 - Medical Records Documentation](#)

PURPOSE OF PROPER INJECTION TECHNIQUE:

The purpose of proper injection technique is to ensure medication is administered correctly and to decrease the risk of tissue damage or medication errors.

REQUIRED KNOWLEDGE:

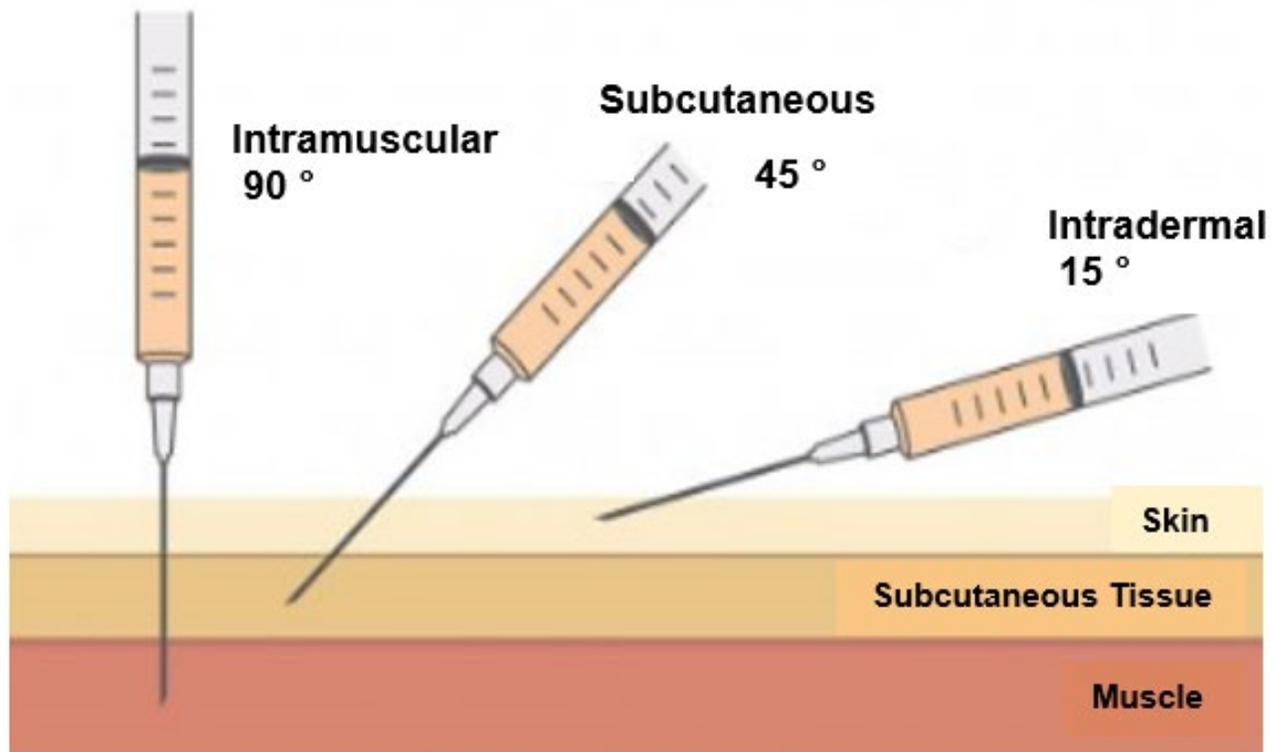
I. Types of Injections

Intramuscular (90° angle)	Subcutaneous (45° angle)	Intradermal (5-15° angle)
<ul style="list-style-type: none"> • Preferred route of administering medication when rapid-acting and long-lasting dosage of medication is required. • Injection of medication into muscle tissue forms a deposit of medication that is absorbed gradually into the bloodstream.  <p>The diagram shows a cross-section of skin and subcutaneous tissue. A needle is inserted vertically at a 90-degree angle, passing through the skin and subcutaneous tissue to reach the muscle layer below.</p>	<ul style="list-style-type: none"> • Commonly ordered for medication that requires a slower absorption rate than intramuscular injections provide. • The needle must pass through the epidermis and dermis to reach the subcutaneous fatty tissue. • A variety of medications, such as insulin and some immunizations, are given subcutaneously.  <p>The diagram shows a cross-section of skin, subcutaneous tissue, and muscle. A needle is inserted at a 45-degree angle, passing through the skin and subcutaneous tissue but not reaching the muscle layer.</p>	<ul style="list-style-type: none"> • Injection of a small amount of fluid into the dermal layer of the skin. • Is frequently done as a diagnostic measure, such as for tuberculin skin testing.  <p>The diagram shows a cross-section of skin, subcutaneous tissue, and muscle. A needle is inserted at a shallow 15-degree angle, penetrating only the thin dermal layer of the skin.</p>

<https://www.aboutkidshealth.ca/Article?contentid=997&language=English>

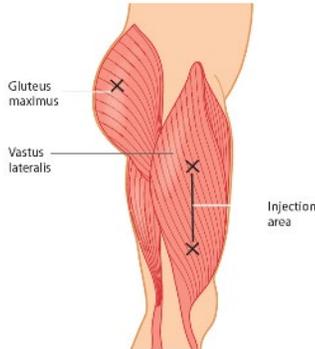
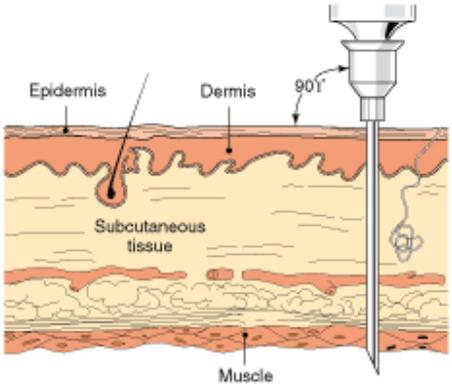
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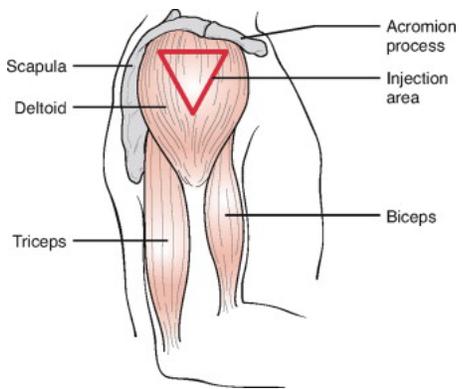
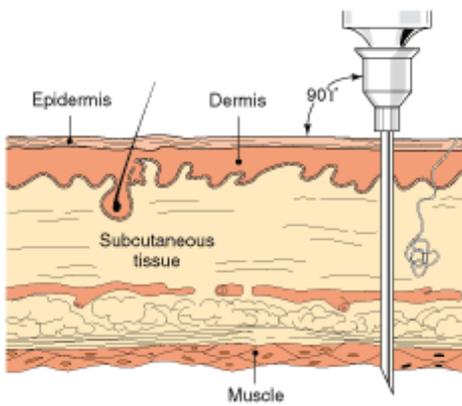
II. Angles for Injection

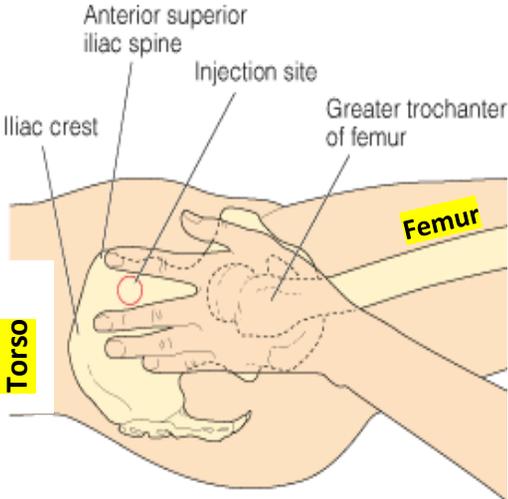
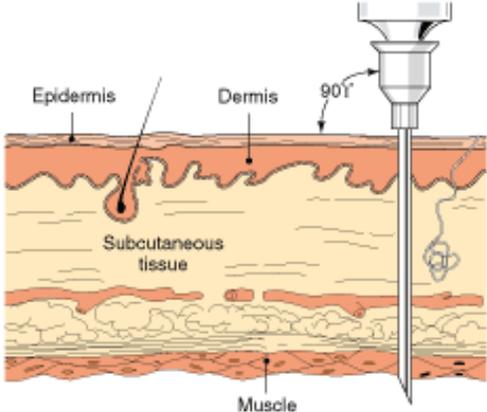


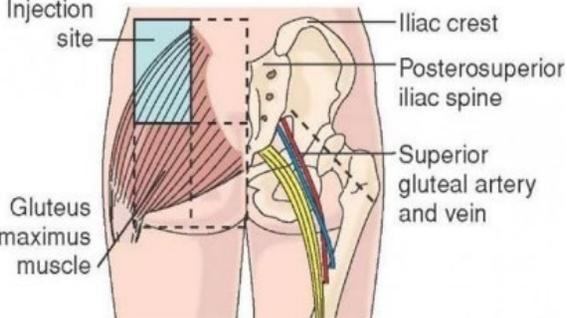
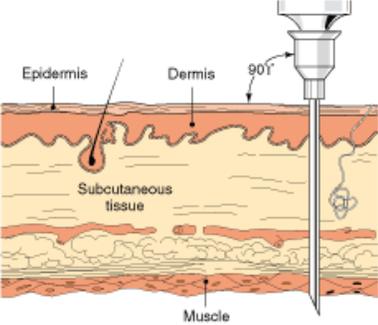
<https://www.shutterstock.com/image-vector/comparison-angles-intramuscular-injection-ideal-medical-673983079>

III. Intramuscular (IM) Injection

Age	Needle Length	Max Fluid	Needle Gauge	Injection Site	Injection Angle
Newborn (0-28 days)	5/8 - 1 inch	1 - 2 ml	22 – 25 gauge	Anterolateral thigh muscle (Vastus Lateralis): <ul style="list-style-type: none"> Outer portion of the leg, mid-upper area of the thigh.  <p>IM injection site (shaded area)</p> <p>http://www.immunize.org/catg.d/p2020.pdf</p>  <p>Gluteus maximus</p> <p>Vastus lateralis</p> <p>Injection area</p> <p>https://www.cdc.gov/vaccines/hcp/acip-recs/general-recs/administration.html</p>	<p>90° angle</p>  <p>Epidermis</p> <p>Dermis</p> <p>90°</p> <p>Subcutaneous tissue</p> <p>Muscle</p> <p>https://www.aboutkidshealth.ca/Article?contentid=997&language=English</p> <p>https://www.cdc.gov/vaccines/hcp/acip-recs/general-recs/administration.html</p> <p>https://www.semanticscholar.org/paper/Intramuscular-injection-CLIMAT-pathway%3A-a-clinic-at-Mraz-Thomas/b26baec7de0d400fc63995fae46c35d2683fd2b/figure/0</p>
Infant (1-12 months)	1 inch				
Toddler (1-2 years old)	1 – 1 ¼ inch				
Child (3-18 years old)	1 – 1 ¼ inch	1 - 3 ml			
Adults (>19 years old)	1 – 1 ½ inch				

Age	Needle Length	Max Fluid	Needle Gauge	Injection Site	Injection Angle
Toddler (1-2 years old) *If muscle mass is adequate	5/8 – 1 inch	1 - 2 ml	22 – 25 gauge	Deltoid muscle (upper arm): <ul style="list-style-type: none"> 1-2 inches below the acromion process (usually 2-3 finger breaths from top of shoulder) in the center. 	<p>90° angle</p>  <p>https://www.aboutkidshealth.ca/Article?contentid=997&language=English</p>
Child (3-18 years old)					
Adults ≥19 years old:					
Male/Female > 130 lbs.					
Male/Female 130-152 lbs.	1 inch	1 – 3 ml			
Female 153-200 lbs.	1 – 1 ½ inch				
Male 153-260 lbs.					
Female > 200 lbs.	1 ½ inch				
Male > 260 lbs.					

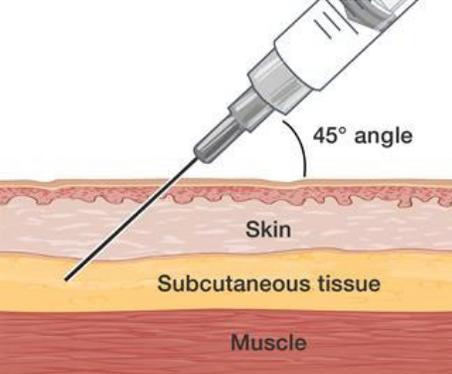
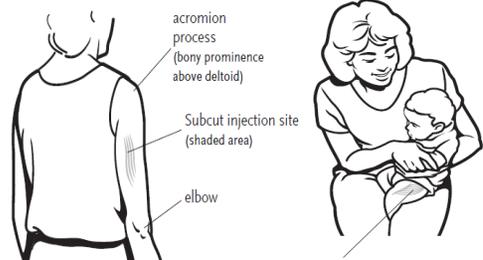
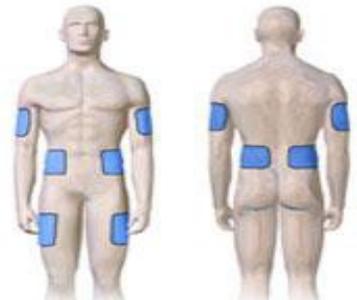
Age	Needle Length	Max Fluid	Needle Gauge	Injection Site	Injection Angle	Comments
<p>Child >3 years old (Must be walking)</p>	<p>1 – 1 ½ inch</p>	<p>1 - 3 ml</p>	<p>21 – 25 gauge</p>	<p>Ventrogluteal muscle:</p> <ul style="list-style-type: none"> Place the palm of your hand over the trochanter. Point your index finger toward the anterior iliac crest. Spread the middle finger toward the back, making a “V”. The thumb should always be pointed toward the front of the leg. Injection site located between your index and middle fingers  <p>http://intramuscularinjectionsim.blogspot.com/2011/05/intramuscular-injection-sites.html</p>	<p>90° angle</p>  <p>https://www.aboutkidshealth.ca/Article?contentid=997&language=English</p>	<p>No Vaccine Administration</p>

Age	Needle Length	Max Fluid	Needle Gauge	Injection Site	Injection Angle	Comments
Child 3 - 10 years old	1 - 1 ½ inch	1 – 2 ml	*20 – 25 gauge	<p>Dorsogluteal muscle:</p> <ul style="list-style-type: none"> Divide buttock into 4 equal quadrants, injection site located in upper outer quadrant.  <p>http://what-when-how.com/paramedic-care/principles-of-medication-administration-clinical-essentials-paramedic-care-part-6</p>	<p>90 ° angle</p>  <p>https://www.aboutkidshealth.ca/Article?contentid=997&language=English</p>	<p>No Vaccine Administration</p> <p>*Some medications come prepackaged with a larger gauge needle (i.e., PCN comes from the manufacturer with 18-gauge needle).</p>
Child ≥ 10 years old		1 – 3 ml				

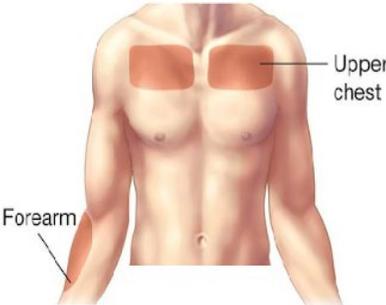
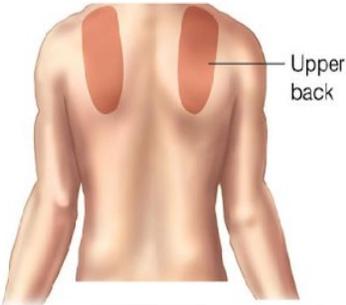
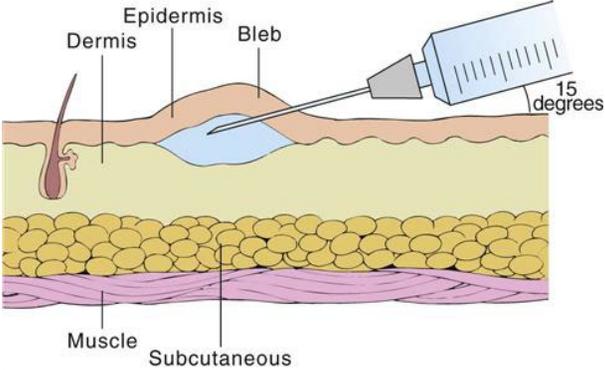
Intramuscular injection

- a. The needle length selected when administering an IM injection for adults is based on patient weight and body mass index.
- b. Aspiration is **not** recommended for immunization.
- c. If aspiration is warranted, pull back the plunger to aspirate tissue fluid.
 - i. If blood appears in the syringe, the needle is in a blood vessel. Discard syringe with needle and prepare to administer medication with a new syringe and needle at a different site.
- d. Large volume medications (e.g., 3ml in deltoid and 5ml in the lateral thigh) can only be administered to adults and when there is a specific notation in the physician's order.
- e. Doses greater than 5ml may be divided accordingly and administered in two (2) different muscle sites.

IV. Subcutaneous Injections

Age	Needle Length	Max Fluid	Needle Gauge	Injection Site	Injection Angle
Infant 0-12 months	5/8 inch	0.5 – 1.0 ml	23-25 gauge	<p>Anterolateral thigh (vastus lateralis): Outer portion of the leg, mid-upper area of the thigh.</p>  <p>Subcut injection site http://www.immunize.org/catg.d/p2020.pdf</p>	<p>45 ° into subcutaneous (fatty) tissue</p> 
Child 1 – 18 years old				<p>Anterolateral thigh (vastus lateralis): Outer portion of the leg, mid-upper area of the thigh.</p> <p>Tricep: area below the shoulder and above the elbow</p>  <p>Subcut injection site http://www.immunize.org/catg.d/p2020.pdf</p>	
Adult ≥19 years old				<p>Arms: Tricep</p> <p>Abdomen: Below the waist to just above the hip bone and from side to about 2 inches from belly button.</p> <p>Thighs: The area halfway between the knee and hip and slightly to the side.</p>  <p>https://commons.wikimedia.org/wiki/File:Injection_Sites_Subcutaneous.png https://www.aboutkidshealth.ca/Article?contentid=998&language=English</p>	

V. Intradermal Injections

Age	Needle Length	Max Fluid	Needle Gauge	Injection Site	Injection Angle
All ages	3/8 – 5/8 inch	0.01 - 0.1 ml	25-27 gauge	<ul style="list-style-type: none"> • Palmar (inner) forearm: 3-4 finger-widths below the antecubital space and one hand width above the wrist • Upper back • Upper chest wall <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  <p>Forearm</p> <p>Upper chest</p> <p>Anterior</p> </div> <div style="text-align: center;">  <p>Upper back</p> <p>Posterior</p> </div> </div> <p style="text-align: center;">Intradermal Injection Sites</p> <div style="text-align: center; margin-top: 20px;">  </div> <p style="font-size: small; margin-top: 10px;"> https://www.medilqbiohealth.com/2021/03/intradermal-injection-sites.html https://wtcs.pressbooks.pub/nursingskills/chapter/18-4-administering-intradermal-medication/ </p>	<p style="text-align: center;">5 - 15 ° angle into the dermis</p> <div style="text-align: center;">  <p style="font-size: x-small;">Dermis Epidermis Bleb 15 degrees Muscle Subcutaneous</p> <p style="font-size: x-small;">https://slideplayer.com/slide/9633508/</p> </div> <div style="text-align: center; margin-top: 20px;">  <p style="font-size: x-small;">https://www.cdc.gov/poxvirus/monkeypox/images/interim-considerations/mpx-intradermal-step1.jpg?_=35321</p> </div>

VI. Injection Procedure

1. Verify licensed practitioner's medication order.
2. Gather needed medication and equipment.
 - a. Check the expiration date of the medication.
3. Verify the patient's identity per MD/ND 101 - Patient Identity Verification (Prior to Providing Healthcare Services).
4. Go through the seven "Rights of Medication Administration" per MD/ND 113 - Administration of Medication, Including Vaccinations.
5. Explain purpose of medication and procedure to patient or parent/guardian.
 - a) For vaccinations provide patient or parent/guardian with the appropriate Vaccine Information Statement (VIS).
6. Obtain consent.
7. Assess for allergies and any contraindications for the medication/injection.
8. Perform hand hygiene for at least 20 seconds or if in the field, use hand sanitizer (for at least 20 seconds) per MD/ND 102 - Standard Precautions for the Prevention of Infections.
9. Set up field for administration of medication via injection and disposal of infectious waste.
10. Don (put on) gloves.
11. Locate appropriate anatomical site for injection based on route (e.g., Intramuscular, Subcutaneous, and Intradermal), age, and medication.
12. Prepare injection site by cleaning skin with an alcohol pad, using a circular motion from the center outwards, and allow to air dry completely.
 - a. It is **not** recommended to speed up the drying process by fanning or blowing over the injection site.
13. While skin is air drying:
 - a. Clean tip of the medication vial with an alcohol pad.
 - b. Draw up the correct dose of the medication with the appropriate needle and syringe.
14. Relocate and stabilize injection site (e.g., hold skin taut with your non-dominant hand).
15. Inject medication at a constant rate until all medication is delivered.
16. Remove needle and syringe and activate the safety device, if applicable.
 - a. For Subcutaneous and Intramuscular injections, apply pressure to site for several seconds with dry cotton ball or gauze.
17. Dispose of syringe with needle immediately after use in a sharps container.
18. Cover site with bandage, if warranted.
19. Monitor patient for at least 15 minutes for adverse reactions.
20. Document all medications administered.

Domain 3: Injection Techniques
Sample Test Questions

1. When administering a subcutaneous injection, the needle must pass through the epidermis and dermis to reach the subcutaneous fatty tissue?
 - a. True
 - b. False

2. When administering a(n) _____ injection the needle should be inserted at an angle of 5-15°.
 - a. Intramuscular
 - b. Subcutaneous
 - c. Intradermal

3. When administering an IM injection, doses greater than 5ml may be divided and administered into two different muscle sites?
 - a. True
 - b. False

4. Vaccines may be administered to the Gluteus muscles site.
 - a. True
 - b. False

5. Aspiration is recommended when administering immunizations.
 - a. True
 - b. False

Answers: 1a, 2c, 3a, 4b, 5b

DOMAIN 4: SPECIMEN COLLECTION

COMPETENCIES:

Upon completion of this section, participants will be able to:

- Identify the four steps for ensuring a good quality specimen for testing.
- Demonstrate how to obtain a Nasopharyngeal (NP) swab specimen
- Discuss actions to take if resistance is met during a nasopharyngeal specimen collection.
- Recall the proper procedure for collecting a throat specimen.
- List the areas to avoid during a throat specimen collection.
- Recall the proper procedure for collecting a venipuncture blood specimen.

POLICIES:

[MD/ND 101 - Patient Identity Verification \(Prior to Providing Healthcare Services\)](#)

[MD/ND 102 - Standard Precautions for the Prevention of Infections](#)

[MD/ND 111 - Laboratory Specimens: General Information](#)

[MD/ND 115 – Venipuncture to Obtain a Blood Specimen](#)

[MD/ND 116 – Transport of Medical Waste](#)

[MD/ND 117 – Nasopharyngeal Specimen Collection](#)

[MD/ND 121 - Medical Records Documentation](#)

[MD/ND 126 – Throat Swab Specimen Collection](#)

PURPOSE OF PROPER SPECIMEN COLLECTION TECHNIQUE:

Proper specimen collection technique is essential to ensuring the accuracy and validity of test results. There are four steps in ensuring a good quality specimen for testing: (1) preparation of the patient, (2) collection of the specimen using proper specimen collection technique and using proper collection containers, (3) specimen processing ensuring the specimen is labeled correctly, and (4) prompt storing and/or transporting of the specimen.

REQUIRED SKILLS:

PERFORMANCE CRITERIA FOR NASOPHARYNGEAL (NP) SWAB	MET	NOT MET	COMMENTS
1. Verbalizes verification of NP swab order.			
2. Verifies patient identity using two patient identifiers <ul style="list-style-type: none"> • Name and Date of Birth 			
3. Verbalizes explanation of the procedure to the patient.			
4. Verbalizes verification of patient consent.			
5. Demonstrates and verbalizes gathering of equipment/ supplies, setting up field for NP swab procedure.			
6. Verbalizes performance of hand hygiene (at least 20 seconds) and demonstrates donning PPE.			
7. Verbalizes assessment of nasal patency.			
8. Demonstrates insertion of dry swab into one nostril straight back along the floor of the nasal passage until reaching the posterior wall of the nasopharynx.			
9. Demonstrates rotating the swab 2-3 times and hold the swab in place for 5-10 seconds to ensure maximum absorbency.			
10. Demonstrates removal of swab from the nose and immediately places the swab in the transport medium.			
11. Demonstrates breaking the shaft at the pointed breakpoint and applying the transport medium cap tightly.			
12. Verbalizes labeling of specimen and putting specimen in a biohazard zip lock bag.			
13. Verbalizes completion of laboratory requisition form.			
14. Verbalizes disposal of infectious waste.			
15. Demonstrates removal of PPE and verbalizes performance of hand hygiene (at least 20 seconds).			
16. Verbalizes documentation of NP swab procedure.			

REQUIRED KNOWLEDGE:

I. Specimen Collection Procedure

1. Order/review the laboratory specimen order(s).
2. Prior to specimen collection, review test description, including specimen type to be collected, volume, collection procedure, collection materials/equipment, storage, handling, and transport instructions.
3. Gather equipment/supplies needed to collect specimen.
 - a. Check expiration date of supplies.
4. Identify the patient prior to the specimen collection per MD/ND- 101, "Patient Identity Verification (Prior to Providing Health Care Services)."
5. Explain the procedure to the patient or parent/guardian.
6. Obtain consent.
7. Set-up field for procedure and disposal of infectious waste.
8. Perform hand hygiene for at least 20 seconds and don personal protective equipment (PPE) per MD/ND-102, "Standard Precautions for the Prevention of Infections."
9. Collect the specimen per protocol.
10. Label specimen with permanently attached label.
 - a. All labels must include:
 - i. The patient's name (last name and first name) or another unique identifier
 - ii. A second identifier (e.g., DOB, address)
 - iii. Date and time of collection
 - iv. Specimen collector's initials
11. Complete the laboratory requisition form to be submitted with the specimen.
 - a. The form must contain the following information:
 - i. Patient name or another unique identifier
 - ii. Date of birth or age
 - iii. Patient contact phone number
 - iv. Date and time of specimen collection
 - v. Type and/or source of specimen
 - vi. Name and location of submitter
 - vii. Examination requested
 - viii. Name(s) of requesting physician
 - ix. Specimen collector's name or initials
 - x. Additional information, if applicable (e.g., gender, disease suspected, outbreak number (OB#)).
12. Assure the patient identifier information on the label matches the requisition.
13. All laboratory specimens will be placed in leak proof containers, then bagged in a single biohazard specimen bag, with the requisition slip and preprinted electronic labels on the specimen (if applicable).
14. Process specimen per protocol per MD/ND-111, "Laboratory Specimens: General Information."
15. Discard any sharps in the appropriate container.

16. Remove PPE and perform hand hygiene for at least 20 seconds.
17. Document per MD/ND-121, "Medical Records Documentation."

Note: Specimens may be rejected if:

1. Patient name or file number does not match the specimen label and/or test requisition.
2. There is no patient name or other unique identifier on the specimen.
3. Specimen is too old for indicated test when received.
4. There is no specimen in the container or insufficient quantity of specimen.
5. The expiration date of the transport medium has been exceeded.
6. Specimen collected in an inappropriate preservative or transport medium.
7. Specimen leaked in transit.
8. Inappropriate storage or transport conditions.

II. Types of Specimen Collection

Venipuncture

Definition:

Puncture of a vein, as for drawing blood, intravenous feeding, or administration of medicine.

Detects:

Used for diagnostic testing.

Collection:

1. Assess for contraindications to venipuncture (e.g., cellulitis, hematoma, vascular shunt or graft, vascular access device) and special precautions (e.g., allergies to latex, fainting spells).
2. Select appropriate site and place tourniquet 3-4 fingers width above the selected site.
3. Instruct patient to hold the arm lower than the heart and open and close fist to observe and palpate for a suitable vein.
 - a. If vein cannot be palpated (felt):
 - i. Massage arms for proximal to distal end and gently tap over intended vein.
 - ii. Remove tourniquet and place warm compress over intended vein for 10-15 minutes.
4. Disinfect site with alcohol swab and allow skin to air dry. **DO NOT** touch site once it is disinfected.
5. Anchor the vein by holding the patient's arm and placing thumb **BELOW** the venipuncture site (do not touch the cleaned site; do not place finger over the vein to guide the needle).
6. Enter the vein swiftly at a 30-degree angle or less. **Note:** After **2** unsuccessful attempts, request for another LCP to perform the venipuncture.
7. Collect blood specimen.
8. Release tourniquet **BEFORE** withdrawing the needle and always after it has been in place for 2 minutes or more.
9. Withdraw needle and place sterile gauze or cotton ball and apply pressure to the venipuncture site and secure with tape to prevent hematoma.
10. Discard the used needle and syringe in the appropriate container.



http://downloads.lww.com/wolterskluwer_vitalstream_com/sample-content/9781451194524_McCall/samples/Chapter08.pdf

Throat Swab Specimen

Definition:

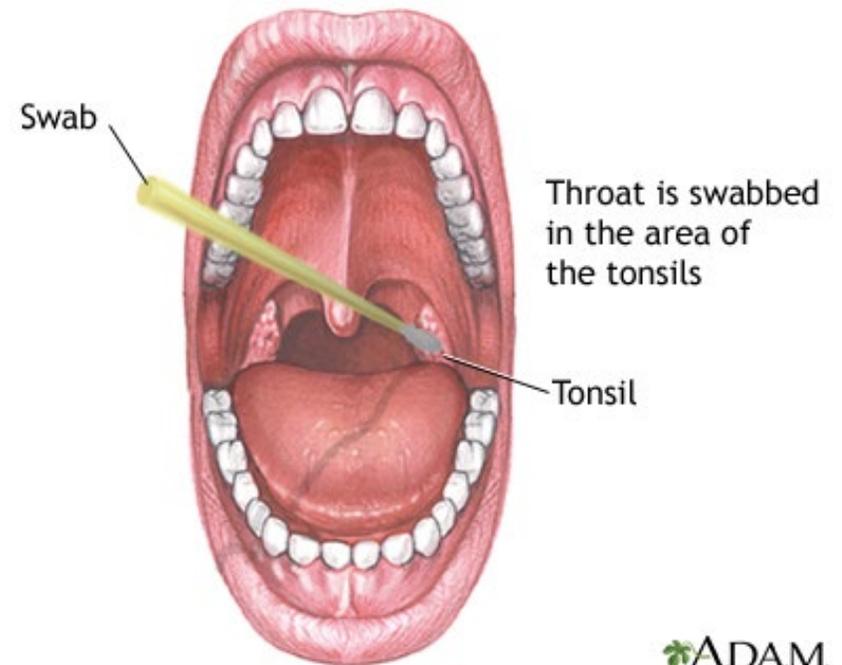
A sample of mucosal cells from the throat.

Detects:

Infections caused by bacterial or respiratory viruses (e.g., measles).

Collection:

1. Instruct patient to sit in chair with head titled back and open mouth.
2. Vigorously rub the sterile swab along the back of the patient's throat near the tonsils several times to obtain an adequate specimen.
Avoid the tongue and cheeks.
3. Immediately place swab in media for the specified pathogen.
4. Swirl the swab in the media and break the shaft at the painted breakpoint.



<http://humanenterovirus71.wordpress.com/2009/04/13/5-diagnosis/>

MD/ND 126 Throat Swab Specimen Collection

<http://intranet.ph.lacounty.gov/ph/PDFs/PolicyProcedures/MD-126.pdf>

Nasopharyngeal Swab Specimen

Definition:

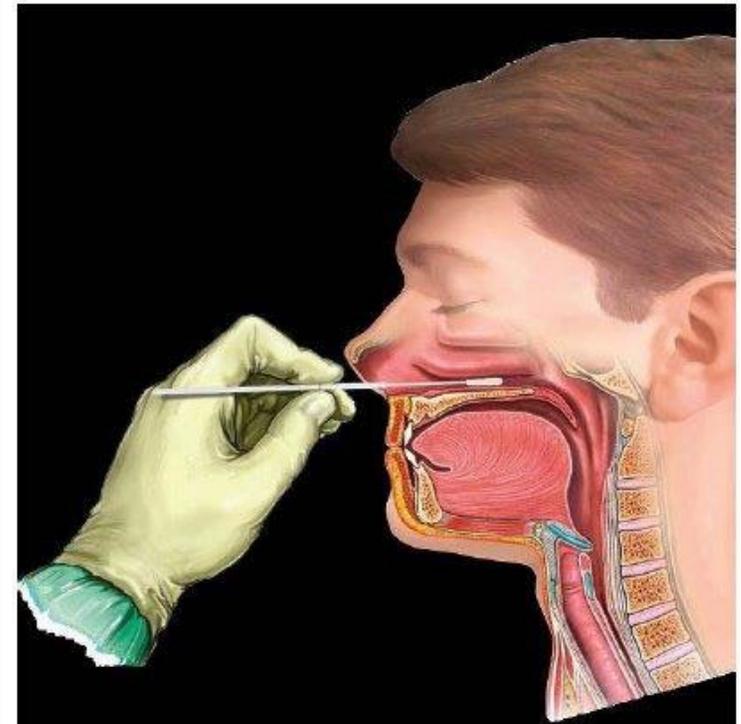
A sample of secretions collected from the uppermost part of the throat, behind the nose.

Detects:

Respiratory viruses and bacterial organisms (e.g., Bordetella pertussis, Neisseria meningitidis, and Staphylococcus aureus.)

Collection:

1. Instruct patient to sit in chair with head tilted back and assess nasal patency.
2. Gently insert dry swab through one nostril **straight back** along the floor of the nasal passage until reaching the posterior wall of the nasopharynx (until slight resistance is met). If a swab is inserted into one nostril and resistance is encountered, remove the swab and insert it into the second nostril.
 - a. Swab should reach a depth equal to the distance from the nostrils to the outer opening of the ear.
3. Rotate the swab 2-3 times and hold the swab in place for 5-10 seconds to ensure maximum absorbency.
4. Immediately place the swab in the transport medium.
5. Break the shaft at the pointed breakpoint and apply the transport medium cap tightly.



MD/ND 117 Nasopharyngeal Specimen Collection

<http://intranet.ph.lacounty.gov/ph/PDFs/PolicyProcedures/MD117.pdf>

<https://www.ottawapublichealth.ca/en/professionals-and-partners/how-to-collect-a-nasopharyngeal-np-swab.aspx>

Domain 4: Specimen Collection
Sample Test Questions

1. Specimens may be rejected for all of the following reasons EXCEPT:
 - a. Specimen leaked in transit.
 - b. There is no patient name or other unique identifier on the specimen.
 - c. Specimens was collected properly.
 - d. Specimen collected in an inappropriate preservative or transport medium.
 - e. Patient name or file number does not match the specimen label and/or test requisition.

2. The four steps for ensuring a good quality specimen for testing include:
 - a. Collection of the specimen using proper specimen collection technique.
 - b. Proper preparation of the patient.
 - c. Proper specimen processing including ensuring the specimen is labeled correctly.
 - d. Prompt storing and/or transporting of the specimen.
 - e. All of the above.

3. When performing a venipuncture, you must enter the vein at a 45° angle.
 - a. True
 - b. False

4. A nasopharyngeal (NP) swab specimen collection is a sample of secretions collected from the uppermost part of the throat, behind the nose.
 - a. True
 - b. False

5. When collecting a throat specimen, vigorously rub the sterile swab along the back of the patient's throat near the tonsils, including the tongue and cheek areas.
 - a. True
 - b. False

Answers: 1c, 2e, 3b, 4a, 5b

SKILLS DEMONSTRATION CHECKLISTS

PERFORMANCE CRITERIA DONNING PPE	MET	NOT MET	COMMENTS
1. Verbalizes performance of hand hygiene for at least 20 seconds.			
2. Verbalizes and demonstrates proper application of gown. <ul style="list-style-type: none"> • Fully covers torso and wraps around back. • Fastens gown ties at neck and waist. 			
3. Verbalizes and demonstrates proper application of face mask. <ul style="list-style-type: none"> • Secures ties or elastic bands (at the middle of the head and neck or around the ears depending on the type of mask being applied). • Fits band to nose bridge and ensures mask is snug to face and below chin. 			
4. Verbalizes and demonstrates applying face shield/goggles and adjusts to fit.			
5. Verbalizes and demonstrates proper donning of gloves. <ul style="list-style-type: none"> • Gloves cover wrist of isolation gown. 			

PERFORMANCE CRITERIA DOFFING PPE	MET	NOT MET	COMMENTS
1. Verbalizes and demonstrates proper removal of gown and gloves. <ul style="list-style-type: none"> • Removes glove using glove-in-glove technique. • Unties gown straps or breaks ties by pulling gown away from your body, fold or roll the gown inside-out into a bundle, only touching the inside of the gown with your bare hands. • Disposes in waste container. • Verbalizes performance of hand hygiene for at least 20 seconds. <div style="text-align: center; font-weight: bold; margin: 10px 0;">OR</div> <ul style="list-style-type: none"> • Grasps the gown in the front and pulls away from body so that the ties break, touching the outside of the gown only with gloved hands. • While removing the gown, folds or rolls the gown inside-out into a bundle. • While removing the gown, peels off gloves at the same time, only touching the inside of the gloves and gown with bare hands. • Disposes in waste container. 			
2. Verbalizes and demonstrates proper removal of goggles. <ul style="list-style-type: none"> • Removes by lifting from the back earpiece without touching the front of the goggles. • Disposes in waste container. 			

<p>3. Demonstrates proper removal of mask.</p> <ul style="list-style-type: none"> Grasps mask ties/elastic bands of the mask and removes mask without touching the front of the mask. Disposes of mask in the waste container. 			
<p>4. Verbalizes performance of hand hygiene for at least 20 seconds.</p>			

PERFORMANCE CRITERIA FOR NASOPHARYNGEAL (NP) SWAB	MET	NOT MET	COMMENTS
1. Verbalizes verification of NP swab order.			
<p>1. Verifies patient identity using two patient identifiers</p> <ul style="list-style-type: none"> Name and Date of Birth 			
2. Verbalizes explanation of the procedure to the patient.			
3. Verbalizes verification of patient consent.			
4. Demonstrates and verbalizes gathering of equipment/ supplies, setting up field for NP swab procedure.			
5. Verbalizes performance of hand hygiene (at least 20 seconds) and demonstrates donning PPE.			
6. Verbalizes assessment of nasal patency.			
7. Demonstrates insertion of dry swab into one nostril straight back along the floor of the nasal passage until reaching the posterior wall of the nasopharynx.			
8. Demonstrates rotating the swab 2-3 times and hold the swab in place for 5 -10 seconds to ensure maximum absorbency.			
9. Demonstrates removal of swab from the nose and immediately places the swab in the transport medium.			
10. Demonstrates breaking the shaft at the pointed breakpoint and applying the transport medium cap tightly.			
11. Verbalizes labeling of specimen and putting specimen in a biohazard zip lock bag.			
12. Verbalizes completion of laboratory requisition form.			
13. Verbalizes disposal of infectious waste.			
14. Demonstrates removal of PPE and verbalizes performance of hand hygiene (at least 20 seconds).			
15. Verbalizes documentation of NP swab procedure.			

References:

DPH Policies:

<http://intranet.ph.lacounty.gov/ph/PolicyProcedures/PublicHealthPolicyProc.htm>

[DPH 325 - Hand Hygiene in Healthcare Settings](#)

[DPH 901 - Incident Reporting](#)

[DPH 921 - Aerosol Transmissible Diseases Standard](#)

MD/ND Protocols: <http://intranet.ph.lacounty.gov/ph/PolicyProcedures/MDPP.htm>

[MD/ND 101 - Patient Identity Verification \(Prior to Providing Healthcare Services\)](#)

[MD/ND 102 - Standard Precautions for the Prevention of Infections](#)

[MD/ND 111 - Laboratory Specimens: General Information](#)

[MD/ND 113 - Administration of Medications, Including Vaccinations](#)

[MD/ND 115 – Venipuncture to Obtain a Blood Specimen](#)

[MD/ND 116 – Transport of Medical Waste](#)

[MD/ND 117 – Nasopharyngeal Specimen Collection](#)

[MD/ND 118 - Management of Anaphylaxis](#)

[MD/ND 121 - Medical Records Documentation](#)

[MD/ND 126 – Throat Swab Specimen Collection](#)

[MD/ND 402 - RN Standardized Procedure - Management of Anaphylaxis](#)

[MD/ND 403 - LVN Standing Order - Response to Anaphylaxis](#)

Clinic Services/Community and Field Services Standards of Practice Manuals:

[CHS 915 - University Health Center Consortium \(UHC\) Safety Intelligence \(SI\) Event Reporting](#)

Other Resources:

Centers for Disease Control (2022). *Advisory Committee for Immunization Practices (ACIP) recommendations*. Retrieved from: <https://www.cdc.gov/vaccines/hcp/acip-recs/general-recs/administration.html>

Centers for Disease Control (2021). *Sequence for Donning and Removing Personal Protective Equipment*. Retrieved from: <https://www.cdc.gov/hai/pdfs/ppe/PPE-Sequence.pdf>

Centers for Disease Control (2019). *Guidelines for Disinfection and Sterilization in Healthcare Facilities (2008)*. Retrieved from: <https://www.cdc.gov/infectioncontrol/guidelines/disinfection/index.html>

Immunization Action Coalition (2020). *How to Administer Intramuscular and Subcutaneous Vaccine Injections*. Retrieved from: <https://www.immunize.org/catg.d/p2020.pdf>

If you require additional assistance, please refer to the Competency Assessment website: <http://intranet.ph.lacounty.gov/ph/Training/LCPbasiccompetencies.htm>

or contact:

Nursing Administration

Email: LCPcompetency@ph.lacounty.gov

Telephone: 213-288-7725