INTERDISCIPLINARY CLINICAL

Policy and Procedure

Title:	Venipuncture for Blood Specimen Collection	Number:	NSHA CL-BP-040 IWK 1913.01
Sponsor:	**NSHA** Senior Director, Pathology & Laboratory Medicine **NSHA** Senior Medical Director, Pathology & Laboratory Medicine **IWK** Director, Diagnostic Imaging, Pathology and Laboratory Medicine & Maritime Medical Genetics Services **IWK** Director, Nursing and Professional Practice	Page:	1 of 26
Approved by:	**NSHA** VP Quality and System Performance **IWK** Policy & Practice Committee	Approval Date: Effective Date:	NSHA Dec. 20, 2019 IWK Sept. 10, 2019 NSHA Sept. 20, 2021 IWK Feb. 10, 2022
Applies To:	All Health Care Professionals performing venipuncture for the purpose of blood specimen collection.		

Note: This is an Entry Level Competency for Health Care Professionals which requires assessment of competency prior to performing. (See Appendix F)

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PREAMBLE

1. The collection of blood specimens by venipuncture is required for the purpose of medical diagnosis, ongoing monitoring and/or the evaluation of patient responses to treatment.
2. The quality of test results is directly dependent upon the quality of the specimen.
3. Pre-analytical Error and patient management complications can be avoided with adherence to this policy and procedure.
4. Patient safety is the ultimate goal, above all other considerations.

POLICY STATEMENTS

1. Until initial competency assessment has been successfully achieved, Health Care Professionals must ensure they are supervised by a qualified Preceptor while performing venipuncture.
    1.1. Initial assessment of competency must be documented and include direct observation by a Preceptor.
    1.2. Phlebotomists must self-assess their own competency on a continual basis, and must immediately address, and bring to their Manager's attention, any deficits in that competency.
    1.3. Annual assessment of competency is required to ensure safe patient care (see Appendix F).
2. A documented order from an Authorized Prescriber/Requestor is required.
3. Consent must be obtained from the patient or Substitute Decision Maker prior to performing venipuncture.
4. Equipment and supplies must be inspected for defects, expiration dates, and used as directed.
    4.1. Safety-engineered needles must be used, in accordance with the *Safer Needles in Healthcare Workplaces Act*.
    4.2. Equipment that collects the patient's blood directly into the specimen container must be used whenever possible.
    4.3. When using a syringe, a transfer device must be used, unless no such device is manufactured for the required container.

4.4. Equipment designated single-use by the manufacturer must not be used more than once.

4.5. All equipment used must be latex-free.

4.6. The specimen container and label must meet laboratory requirements.

5. The patient must be Recumbent, or seated with adequate support to prevent falls if the patient loses consciousness, and provided assistance when required.

5.1. Patients with history of Syncope must be kept Recumbent during the procedure.

6. In an inpatient or emergency department setting, the Phlebotomist must ensure the Health Care Professional overseeing that patient's care is made aware of any adverse event related to the venipuncture (e.g. arterial puncture, nerve damage).

6.1. In an outpatient setting, the patient must be instructed to notify their physician of the event.

6.2. Patient safety events, audits, and patient/family experience feedback are used to identify trends, areas of concern, and opportunities to improve service.

6.2.1. Repeated errors may trigger the need for reassessment of competency.

7. The identity of the patient must be confirmed by the Phlebotomist prior to performing venipuncture.

7.1. The patient's full official name, date of birth, and other patient-specific identifier(s) must match with the information on all requisitions, pre-printed orders, and/or specimen labels.

7.2. Venipuncture must not be performed if identification information is incomplete, illegible, or if any discrepancy exists.

8. The site must be selected in consideration of conditions that will affect the well-being of the patient and the integrity of the specimen.

8.1. Venipuncture must **not** be performed on:

8.1.1. An extremity (limb) with an active central vascular access device (i.e. a PICC line), Shunt, Fistula, or vascular graft.

8.1.2. The Lateral side (i.e. thumb side) of the wrist.

8.1.3. The ventral (palmar) aspect of the wrist,

8.1.4. An infected site, or

8.1.5. An artery.

9. Authorization from the patient's physician must be obtained and documented (see Physician's Authority to Draw Under Special Circumstances Form) prior to performing venipuncture on an extremity with an inactive Fistula.

9.1. Laboratory Phlebotomists must obtain documented authorization from the patient's physician prior to performing venipuncture on any part of the feet or lower extremities (see Physician's Authority to Draw Under Special Circumstances Form).

9.1.1. Laboratory Phlebotomists must not perform venipuncture on the foot of a diabetic patient.

10. A Phlebotomist must make no more than two venipuncture attempts per order on a patient.
    10.1. If the first Phlebotomist is unsuccessful, a second Phlebotomist may attempt the collection, obtaining consent from the patient or Substitute Decision Maker before proceeding.
    10.2. In an inpatient or emergency department setting, after two Phlebotomists each make two unsuccessful collection attempts, the patient's physician/healthcare team must determine if the clinical urgency of the requested tests supports additional attempts by other Phlebotomists. In an outpatient setting, consent must continue to be obtained from the patient or Substitute Decision Maker before proceeding with each additional attempt.
    10.3. Clinical urgency should influence the total number of attempts made at venipuncture on a patient.
11. The sequence of collection must follow the *Blood Collection Order of Draw* (see Appendix B).
12. Specimen containers must be labeled immediately after collection and in the presence of the patient (see Appendix C).
    12.1. Collection information must be documented.
13. Specimens for Blood Transfusion testing must have the requisition signed and the label(s) initialed by both a witness and the Phlebotomist in the presence of the patient.
    13.1. The witness must remain with the patient during the collection procedure.
    13.2. In an inpatient or emergency department setting, the witness must be a healthcare professional employed with NSHA, or the IWK, and working on that patient's nursing unit.
    13.3. In an outpatient setting, a competent patient (or a Substitute Decision Maker) may act as the witness.
    13.4. The requisition must accompany any un-accessioned specimens to the laboratory.
14. All specimens must be transported in a manner that ensures patient confidentiality, proper transport conditions, and supports timely reporting of results.

PROCEDURE

1. Gather equipment and supplies.
    - Appropriate antiseptic solution as per Appendix H
    - Adhesive bandages or medical tape
    - Gauze
    - Gloves (disposable)
    - Safety-engineered needles (size and type determined by patient age, size, condition, and venipuncture site)
        - BD Vacutainer® Eclipse™ Blood Collection Needles (21G and 22G)
        - BD Vacutainer® Winged Blood Collection Sets (21G, 23G and 25G)
    - Approved sharps container
    - Specimen labels

- Tourniquet (single use)
- BD Vacutainer® holders (single use)
- Specimen containers (tubes and/or culture bottles)
- Syringes and transfer devices

2. Prior to proceeding with the collection:

   2.1. Review the order and identify collection conditions that must be met (e.g. fasting [AC/NPO], blood cultures, timed test), and/or special considerations and previous blood test requests, where applicable.

   2.2. For patients <19 years old, review patient weight and requested draw volume to ensure the collection will not exceed the acceptable limit, where applicable (see Appendix G).

> **Note:** The patient's clinical status may require drawn blood volume to exceed the guidelines in Appendix G. The patient's attending physician or nurse practitioner must be consulted prior to exceeding these guidelines.

   2.3. Coordinate assistance when required (e.g., patient condition, age, etc.).

3. Bring any findings that may modify or delay the collection request to the Authorized Prescriber/Requestor/healthcare team's attention for further direction.
4. Obtain required equipment, requisition(s) and/or label(s).
5. Locate the patient.
6. If the patient is on Additional Precautions (i.e., Contact/Droplet or Airborne), follow the directions on posted signage.
   - Ensure appropriate personal protective equipment is worn prior to entering the patient room.
7. Greet the patient, introduce yourself, explain the process to occur, and obtain consent.
8. Ensure patient privacy as much as possible (e.g. close the privacy curtain or door).
9. Check for additional restrictions (e.g. practice alert posters, IV sites, Fistula).
10. Perform hand hygiene in view of the patient (see NSHA IPC-RP-020 Hand Hygiene or IWK-205.2-Hand Hygiene).
11. Select and gather all necessary supplies and bring them to the bedside/collection chair.
    - Collections from hands, feet, or for blood cultures will require the use of a winged blood collection set.
    - Refer to blood culture process maps to determine required bottle(s) (for patients <19 years old, see Appendix I, patients greater than or equal to (≥)19 years old, see Appendix D).
12. Don clean, latex-free gloves.
13. Confirm the patient's identity and verify the information received matches all appropriate documentation (e.g. chart, requisition(s), label(s)).

Patient type	Identification
Patients with identification bands	Check the patient's identification band for the full official name, date of birth, and one additional person-specific client identifier (e.g. medical record number or health card number).
Inpatients, or emergency department patients, who are unable to wear an armband	The patient's nurse will identify the patient, following organizational policy.
Registered outpatients without an identification band	• The patient must state their full official name and date of birth. • The Phlebotomist must compare one additional person-specific client identifier (e.g. a medical record number or health card number) on the requisition to all specimen labels. • If the patient is unable to participate in the identification process, use a Reliable Source (see NSHA CL-SR-025 Client Identification) or family/guardian (see IWK-1100-Patient Identification).
Patients requiring blood typing and/or transfusion-related testing	• As per patient type above. Additionally, a witness must be present during verification of patient identity and the collection. • In the presence of the patient, both the witness and the phlebotomist must provide their full, legible signatures on the requisition (or the large demographic label acting as a requisition) and initial the specimen label(s). Note that this is in addition to, not a replacement of, other required collection information of the receiving laboratory.

13.1. The provided identifiers must be present on, and verified against, all appropriate documentation (e.g. identification band, chart, requisition(s), label(s)).

13.2. If the Phlebotomist is required to leave the patient, the patient's identity must be confirmed again upon return.

14. Following institutional guidelines, ensure pain management/distraction techniques are used as appropriate. Examples include topical anesthetic, sucrose (for patients 12 months and younger), non-nutritive sucking for neonates, facilitated tucking, swaddling, positioning for comfort, and skin to skin contact (see IWK-1745 & NSHA MC-NB-001 Skin to Skin Contact for Healthy Term Infants). Use developmentally appropriate distraction techniques as necessary (e.g. deep breathing, counting, conversation, singing, telling jokes/stories, tablets/phone apps).
15. Ensure the patient is positioned in a seated or Recumbent position.

15.1. If the patient has a preference as to which arm is used, always consider that arm first.

15.2. The patient's arm should be positioned as follows:

Patient Position	Arm Position
Recumbent	Horizontal
Seated	At a slightly downward angle, in a straight line from shoulder to wrist, with a suitable support (e.g. armrest, table)

15.3. A slight bend at the elbow may assist in vein location and avoid hyperextension

15.4. Do not forcibly extend the arm of a patient, as they may be unable to extend due to stroke, injury, or other circumstances.

16. Select the appropriate venipuncture site.

16.1. If the chosen limb has an active IV infusion, ensure the infusion is stopped two minutes before proceeding.

16.2. The following sites should only be used in the absence of another location:

- A site with extensive scarring or burns
- Sections of vein covered by a Hematoma
- A site with a tattoo
- Edematous sites
- Paralyzed extremities
- The same side as a previous axillary lymph node surgery or mastectomy
- A location Proximal to an active intravenous (IV) site. This site can only be used if the IV is inserted Distal to the antecubital fossa **and** the tourniquet can be applied 8-10cm Proximal to venipuncture site

17. Apply a disposable, latex-free tourniquet 8-10cm Proximal to the selected puncture site.

17.1. Do not apply over infected areas, burns, lesions, etc.

17.2. When the collection must occur from a site Distal to an actively infusing IV, apply the tourniquet Distal to the IV site and Proximal to the intended puncture site

17.3. Ensure the tourniquet is tight enough to distend the veins, but not so tight that it causes unnecessary discomfort to the patient or compresses arteries.

17.4. A blood pressure cuff inflated below the patient's diastolic pressure may be used in place of a tourniquet.

17.4.1. If a blood pressure cuff is used as a tourniquet, it must be cleaned and disinfected between uses.

Note: In the neonatal population, patient size may preclude the use of a tourniquet.

18. If collecting from the arm or hand, instruct the patient to clench and hold their fist (if possible), and to refrain from pumping their fist.

19. Select the vein and puncture location by palpating with the index or middle finger (or locate visually, for neonates).

> **Note:** Venipuncture must not be performed on the scalps of newborns without physician permission and specialized training.

19.1. Prioritize antecubital fossa veins as follows:

Order or Priority	Location	Veins
First	veins in the median aspect (centre)	Median and lateral aspects of the: • median cubital vein, • median basilic vein, and • median cephalic vein.
Second	veins in the lateral aspect (outer)	cephalic and accessory cephalic veins.
Third	veins in the medial aspect (inner)	basilic vein and medial aspect of the median cubital vein.

19.2. The selected vein should be spongy, elastic, and give under gentle pressure of the palpating finger.

19.3. If required, prominence of veins may be enhanced by massaging the arm from wrist to elbow and/or using fingers to lightly tap on the vein two (2) – three (3) times.

20. Release the tourniquet after no more than one (1) minute.

20.1. If the tourniquet has been left on for longer than one minute, wait at least two (2) minutes before reapplying to that limb.

21. Cleanse the site with friction using the appropriate cleanser and drying time (see Appendix H).

21.1. If the area has to be re-palpated after cleansing, repeat site cleansing after palpation.

22. While the cleanser is drying, assemble and place equipment within easy reach.

> **Note:** If, during the procedure, you must obtain additional supplies from a cart, tray, etc., remove gloves, perform hand hygiene, obtain the equipment needed and don new gloves.

22.1. Attach the BD Vacutainer® needle to the holder.

22.2. Remove caps from blood culture bottles, if required (refer to appendices D, I and J).

22.2.1. Cleanse rubber tops of culture bottles and any discard tubes with 70 percent isopropyl alcohol.

22.2.2. Allow to air dry.

22.2.3. Mark the fill line (3ml above the initial volume of pediatric bottles, and 10ml above the initial volume for all other bottles).

23. Reapply the tourniquet.

24. Uncap or remove the sheath from the needle and inspect the bevel for burrs and/or defects.

24.1. Ensure the bevel side of the needle is facing up.

24.2. If using a winged blood collection set, grasp the needle by the wings and pinch them together with the thumb and forefinger.

Note: Be careful not to engage the safety mechanism.

25. With the needle in one hand, use the thumb of the opposite hand to draw the skin taut, anchoring the vein two and one half (2.5) – five (5) cm below and to the side of the venipuncture site.

Note: Do not anchor the vein above the puncture site.

26. Inform the patient that the venipuncture is about to occur.

26.1. Be prepared to react to Syncope, sudden unexpected movement, etc.

26.2. Fingers may be placed around and underneath the limb/extremity to secure against unexpected movement of the patient.

27. With the bevel up, puncture the vein with a steady, forward motion in the direction of blood flow, keeping the needle in line with the vein and at a 30 degree angle or less.

27.1. Support the needle in the vein, keeping it as stable as possible.

27.2. Be prepared to remove the needle if the patient complains of shooting pain, burning, withdraws consent, etc.

27.3. If using a winged blood collection set, observe for the presence of blood in the chamber before proceeding, and maintain needle placement by holding or otherwise securing the device throughout the collection.

28. Using the index and middle fingers on the flanges of the holder to stabilize the device, advance the first tube so the interior needle pierces the closure and blood flows freely into the tube.

28.1. Follow the Blood Collection Order of Draw (Appendix B) to determine container collection order and the necessity of a discard tube.

28.2. If collecting with a syringe, withdraw the desired amount of blood by pulling the syringe plunger back with a slow, steady motion, filling the syringe.

29. Instruct the patient (if possible) to open his/her hand.

29.1. Continue to ensure the patient does not pump their fist.

30. Release the tourniquet as soon as blood flow is established, ensuring it is not on for longer than one minute.

31. Allow the tube to fill until the vacuum is exhausted and blood flow ceases, or the marked fill line of a blood culture bottle is reached.

31.1. Disconnect the container from the needle/holder and mix using gentle inversion.

Note: See the Blood Collection Order of Draw (Appendix B) for number of inversions.

31.2. Insert/connect and fill each remaining tube following the Blood Collection Order of Draw.

31.3. If additional syringes are required, change the syringe, ensuring stability of needle position.

32.

Eclipse™ Blood Collection Needles	Push-Button Winged Blood Collection Sets
1. Withdraw the needle.	1. Grasp the sides of the unit between the thumb and middle finger.
2. Immediately activate the safety mechanism.	2. Use the index finger to cover the retractor button.
	3. While covering the puncture site with gauze, press the retractor button to engage the safety mechanism. The needle will retract into the plastic casing.

33. Immediately apply firm pressure to the venipuncture site with a gauze pad, and maintain until bleeding has stopped, to prevent Hematoma.

33.1. Apply mild pressure on venipuncture sites for patients less than three years old.

34. Transfer specimens collected in a syringe, using an approved safety transfer device, into the appropriate container(s).

34.1. Mix the tubes by gentle inversion after they have been filled.

35. Dispose of syringe/needle/Vacutainer® holder assemblies into an approved sharps container.

36. Dispose of discard tubes and any soiled waste (e.g. gauze contaminated with blood) into a biohazardous waste receptacle.

37. Discard unsoiled waste (including the tourniquet) into an appropriate waste receptacle.

38. Ensure bleeding has stopped and apply an adhesive bandage, or tape gauze in place, over the venipuncture site.

38.1. Adhesive bandages are **not** recommended for patients less than three years old.

39. Label the blood tubes **in the presence of the patient**.

39.1. Ensure labels are affixed to the specimen containers in accordance with laboratory requirements (see appendices C and E).

40. Perform the **Final Check** on all patients wearing an identification band.

40.1. Read aloud the last three digits of a person-specific client identifier (e.g. medical record number) on:

40.1.1. The patient's identification band,

40.1.2. Each specimen label, and

40.1.3. Each requisition.

40.2. Verify the numbers match and ensure discrepancies are resolved before the specimens are sent to the laboratory.

40.2.1. Report discrepancies as a near miss event.

41. Remove and dispose of gloves.

42. Perform hand hygiene (see NSHA IPC-RP-020 Hand Hygiene).

43. Complete any requisition(s), electronic order(s) and specimen label(s) by providing all required collection information (e.g. collector identifier, date and time of collection, collection site).

44. Ensure the patient is comfortable.

44.1. Return items (e.g. bedrails, furniture, equipment) to their original location.

45. Perform hand hygiene upon exit of inpatient rooms.

46. Ensure specimen(s) is/are transported to the laboratory as soon as possible, adhering to laboratory requirements associated with handling, packaging and transportation.

REFERENCES

Legislation

Safer Needles in Healthcare Workplaces Act, Nova Scotia, 2006.

Personal Health Information Act, Nova Scotia, 2013.

Other

Binkhamis, Khalifa & Forward, Kevin. Effect of the Initial Specimen Diversion Technique on Blood Culture Contamination Rates; Journal of Clinical Microbiology. 52(3): 980-981; 2014.

CLSI. Collection of Diagnostic Venous Blood Specimens; Approved Standard-7th Ed. CLSI document GP41-A6. Wayne, PA; Clinical and Laboratory Standards Institute; 2017.

CCME. Guidelines for the Management of Biomedical Waste in Canada. CCME-EPC-WM-42E. Canadian Council of Ministers of the Environment; 1992.

Howie, Stephen R.C. Blood Sample Volumes in Child Health Research: Review of safe Limits. Bulletin of the World Health Organization. 89:46-53; 2011.

Miller-Keane Encyclopedia and Dictionary of Medicine, Nursing, and Allied Health, 7th Ed. 2003, Elsevier.

RELATED DOCUMENTS

Policies

AVDHA – 300.034 – Breastfeeding Promotion, Protection and Support

AVDHA – 300.035 – Clinical Practice Guidelines for Breasfeeding Promotion, Protection and Support

CBDHA – A-7-031 - Breastfeeding

CC – 07-070 – Patient Controlled Analgesia – Acute Pain Management

CEHHA – 402-314 – Breastfeeding

CH – 20-017 – Biomedical Waste Management

CHA – 212-029 – Infant Feeding Policy

NSHA IPC-CL-001 Cleaning and Disinfection of Non-Critical Reusable Patient Care Equipment

NSHA IPC-RP-020 Hand Hygiene

IWK - 20.36 - Oral Sucrose Administration for Minor Procedural Pain Management in Infants Less than or Equal to 12 Months of Age

IWK – 20.77 – Care Directive for the Application of Topical Anesthetics

IWK – 205.2 – Hand Hygiene

IWK - 685.1 - IWK Health Centre and Public Health Services, Central Region Breastfeeding Policy

IWK – 1008.1 - Safety Engineered Needles

IWK – 1449 – Specimen Management for Pathology

IWK – 1519 Pain Management Policy

GASHA – 7-75 – I.V Patient Controlled Analgesia

GASHA – 9-110 – Preparation, Handling & Disposal of Infectious/Hazardous Waste

GASHA – 11-50 – Transportation of Biomedical Waste

NSHA CL-SR-025 Client Identification

NSHA AD-PSE-001 Waste Collection, Handling, Storage, Transportation & Disposal

NSHA IPC-RP-001 Routine Practices and Precautions

NSHA IPC-RP-010 Contact Precautions

NSHA IPC-RP-015 Droplet Precautions

NSHA IPC-RP-025 Airborne Precautions

NSHA MC-NB-001 Skin to Skin Contact for Healthy Term Infants

PCHA – 1-i-30 – Infant Feeding Policy

PCHA – 9-m-40 – Management of Biomedical Waste

SSH – NU-400-542 – Breastfeeding Policy

SSH – NU-400-541 – Sucrose Oral Solution for Infant Pain Management

SSH – SSH-ES-160-103 – Waste Management Policy

SWH – 800.716 – Sucrose Administration for Procedural Pain in Children Less Than or Equal to 12 Months of Age

SWH – I-130-1 – Breastfeeding Promotion, Protection and Support

Learning Module: Venipuncture for Blood Specimen Collection

Forms

CD2154MR 2018-07 Physician's Authority to Draw Blood Under Special Circumstances

Other

EZ Required Criteria for Laboratory Requisitions and Specimens # SPA.15

Appendices

Appendix A – Definitions

Appendix B – Blood Collection Order of Draw

Appendix C – Instructions for Blood Tube Labelling

Appendix D – Non-Pediatric Blood Culture Process Map

Appendix E – Blood Culture Bottle Labelling Guide

Appendix F – Assessment of Competency Requirement

Appendix G – Maximum Total Pediatric Blood Collection Volume

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Appendix I – Blood Culture Bottle Selection for Pediatric Patients

Appendix J – Pediatric Blood Culture Collection

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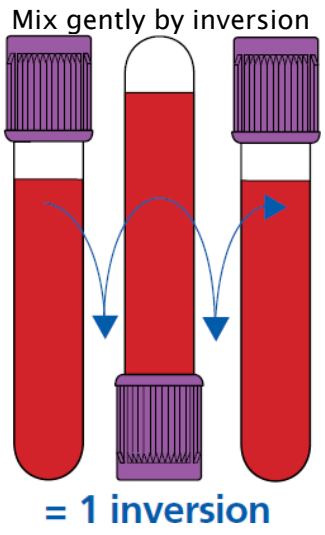
Appendix A: Definitions

Active IV Site	A venous infusion port that is connected to intravenous fluids via a plastic tube. The site is considered active even if the infusion of fluids is interrupted (e.g. by shutting off the pump, engaging a clamp, etc.).
Aseptic Technique	The application of strict rules to minimize the risks of infection and contamination by microorganisms.
Authorized Prescriber	A physician or dentist registered to practice in their respective province/country, or a nurse practitioner with a collaborative practice agreement in Nova Scotia.
Authorized Requestor	Anyone delegated the authority to order a test through care directives, delegated care functions, expanded role designation, organizational policies, etc.
Competence	The ability to integrate and apply the knowledge, skills, and judgment required to practice safely and ethically in a designated role and practice setting, for both entry-level and continuing competencies.
Distal	Situated away from the centre of the body in relation to the specified location of interest.
Fistula	An abnormal or surgically made passage between a hollow or tubular organ and the body surface, or between two hollow or tubular organs.
Health Care Professional	An individual, qualified by education, training, licensure/regulation (when applicable) and facility privileging (when applicable) who performs a professional service within his/her scope of practice. For the purpose of this policy includes, but is not limited to, the following: Physicians, Nurse Practitioners, Registered Nurses, Licenced Practical Nurses, Medical Lab Technologists, and Medical Lab Assistants.
Hematoma	A localized swelling filled with blood, caused by a break in the wall of a blood vessel.
Inactive IV	A venous infusion port that is not connected to intravenous fluids (e.g. a saline or heparin lock).
Lateral	The side of the body or body part that is farther from the middle or centre of the body.
Medial	The side of the body or body part that is closer to the middle or centre of the body.
Median	Situated in the middle of a body or body part.

Phlebotomist	A Health Care Professional trained to draw blood by venipuncture.
Pre-analytical Error	An error that occurs during the pre-analytical phase (specimen collection, handling, processing and transport) of laboratory testing that influences the quality of laboratory services.
Preceptor	An experienced practitioner who provides role support and learning experiences to students and staff learners.
Proximal	Situated toward the centre of the body in relation to the specified location of interest.
Recumbent	Lying down.
Reliable Source	A reliable source is anyone who may be accompanying the Client or is knowledgeable of who the client is. This may include, but is not limited to, a Substitute Decision Maker, another Health Care Provider, RCMP/Police, or someone within the Client's circle of care.
Shunt	A passage between two natural channels, especially between blood vessels.
Substitute Decision Maker	The SDM of an individual shall be chosen from the following, in descending order: (a) a person who is authorized by or required by law to act on behalf of the individual; (b) the individual's guardian appointed by a court of competent jurisdiction; (c) the spouse of the individual; (d) an adult child of the individual; (e) a parent of the individual; (f) a person who stands in loco parentis to the individual; (g) an adult sibling of the individual; (h) a grandparent of the individual; (i) an adult grandchild of the individual; (j) an adult aunt or uncle of the individual; (k) an adult niece or nephew of the individual; (l) any other adult next of kin of the individual; (m) the Public Trustee.
Syncope	Temporary loss of consciousness caused by a fall in blood pressure.

Appendix B: Blood Collection Order of Draw

Closures	Container	Inversions	Notes
Clear Top	Discard Tube	n/a	See notes for Blood Cultures and Sodium Citrate Tube
Blue Cap; Green Cap; Pink Cap; Red cap; Yellow Cap	Aerobic, Pediatric and Mycobacterial Blood Cultures	8-10	Except for patients under 19 years old, a Discard Tube must be drawn and disposed of prior to the collection of blood cultures.
Purple Cap; Orange cap	Anaerobic Blood Culture	8-10	
Lt Blue; Lt. Blue Clear Top	Sodium Citrate Tube	3-4	If using a winged collection set, a Discard Tube must be drawn first.
Black; Black	Sodium Citrate Tube	3-4	
Red	Serum Tube	5	
Royal Blue (red stripe label)	Trace Element Serum Tube	8-10	
Gold; Red/Black; Orange	Serum Separator Tube	5	
Light Green; Light Green/Grey	Plasma Separator Tube	8-10	
Dark Green	Heparin Tube	8-10	
Lavender; White; Pink; Tan	EDTA Tube	8-10	
Royal Blue (lavender stripe label)	Trace Element EDTA Tube	8-10	
Grey	Fluoride Tube	8-10	
Yellow	ACD Solution A or B Tube	8-10	



Appendix C: Instructions for Blood Tube Labelling

All tubes are pre-labeled by the manufacturer

Label contains tube expiry date

CORRECT PATIENT'S LABEL PLACEMENT

- Place patient's label (no larger than 2" X 1") directly over manufacturer's label to ensure that the specimen is visible.
- Align label lengthwise directly under the stopper, with patient's name reading left to right.

Label <u>must</u> be stuck on smoothly

INCORRECT PATIENT'S LABEL PLACEMENT

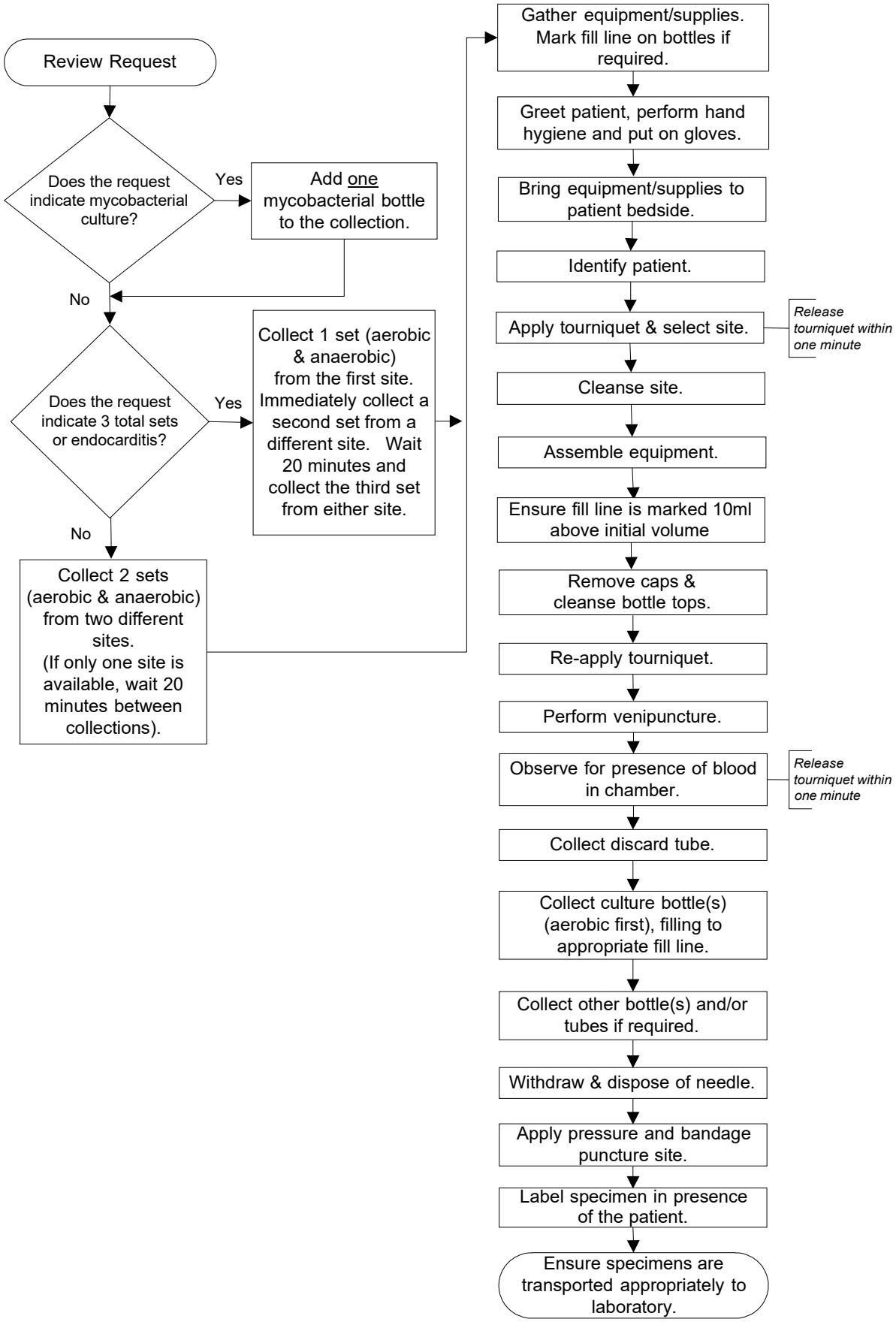
Not straight/upside down

Wrapped around

Extending beyond tube

Over cap

Appendix D: Non-Pediatric Blood Culture Process Map



Appendix E: Blood Culture Labelling Guide

All bottles are pre-labeled by the manufacturer.

The label contains the bottle's expiry date.

Patient's label must be no larger than 2" X 1"

Align patient's label lengthwise so it is:

- straight, and
- stuck on smoothly.

BD BACTEC™ Bottles:

- Place label so patient's name is read with the cap on the left.

BacT/ALERT® Bottles:

- Place label so patient's name is read with the cap on the right.

Ensure the patient's label **does not cover**:

1. the expiry date,
2. the gap in the manufacturer's label,
3. the measurement guide,
4. the bar code on the manufacturer's label, or
5. any portion of the bottom of the bottle.

Appendix F: Assessment of Competency Requirements

Initial Competency

All healthcare professionals training in venipuncture or new to the organization will complete and document the following prior to performing unsupervised collections:

- Review Venipuncture for Blood Specimen Collection Policy and Procedure.
- Review the Learning Module.
- Successfully complete the Learning Module post test.

Successfully demonstrate competency to perform venipuncture, with that demonstration witnessed and documented by a Preceptor. A successful venipuncture requires that all procedure steps are performed correctly, in appropriate order, and all requested venous blood samples are obtained. Note: specific collection targets, such as number of venipunctures, may be required as defined by individual departmental training programs.

Annual competency

To ensure ongoing competency, all employees performing venipuncture will:

- complete a self-assessment, based on a review of the Venipuncture for Blood Specimen Collection Policy and Procedure
- document that the review has been completed
- where applicable, complete department-specific annual assessments.

Where the employee does not complete the annual competency requirements, or where the employee or manager identifies issues with individual competency, the employee will be required to repeat the requirements for initial competency.

Management support

Management will support staff and safe patient care by reporting quarterly on venipuncture-related reports (e.g. LIS, SIMS), and provide feedback to staff on the incidence of errors in their areas.

Where a **pattern of errors** emerges from these reports, managers will investigate the root cause, to determine whether errors are arising due to process issues, or individual staff competency.

Appendix G: Maximum Total Pediatric Blood Collection Volume

Body Wt (Kg)	Maximum Allowable Volume (ml) in one blood draw	Maximum Total Volume (mL) Drawn Every 30 Days	Minimum Hgb (g/L) Required at Time of Blood Draw	Minimum Hgb Required at Time of Blood Draw if Patient has Respiratory/CV Compromise
1	2.5	5	70	90-100
2	5	10	70	90-100
3	6	12	70	90-100
4	8	16	70	90-100
5	10	20	70	90-100
6	12	24	70	90-100
7	14	28	70	90-100
8	16	32	70	90-100
9	18	36	70	90-100
10	20	40	70	90-100
11-15	22-30	44-60	70	90-100
16-20	32-40	64-80	70	90-100
21-25	42-50	64-100	70	90-100
26-30	52-60	104-120	70	90-100
31-35	62-70	124-140	70	90-100
36-40	72-80	144-160	70	90-100
41-45	82-90	164-180	70	90-100
46-50	92-100	184-200	70	90-100
51-55	102-110	204-220	70	90-100
56-60	112-120	224-240	70	90-100
61-65	122-130	244-260	70	90-100
66-70	132-140	264-280	70	90-100
71-75	142-150	284-300	70	90-100
76-80	152-160	304-320	70	90-100
81-85	162-170	324-340	70	90-100
86-90	172-180	344-360	70	90-100
91-95	182-190	364-380	70	90-100
96-100	192-200	384-400	70	90-100

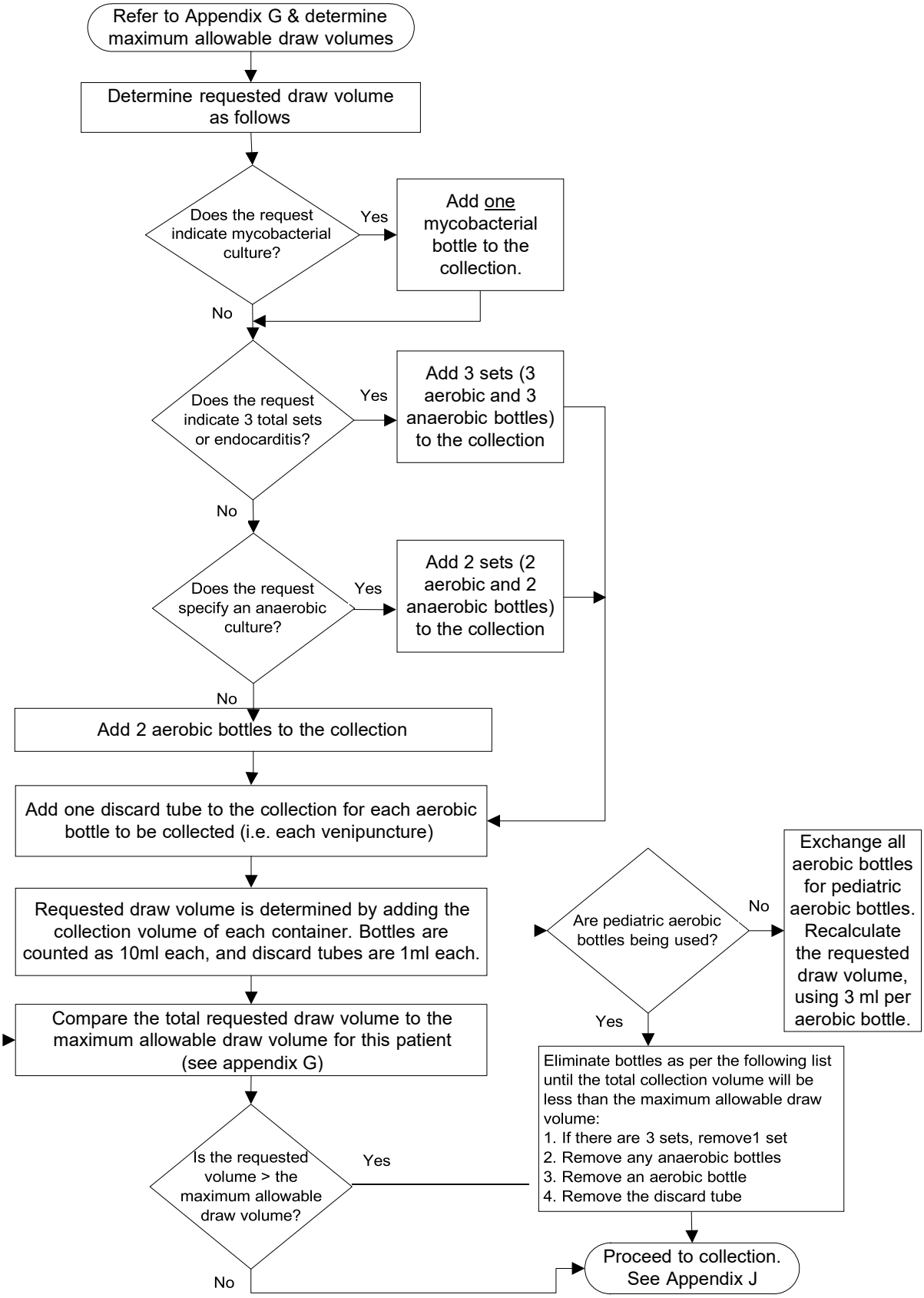
Based on Blood Volume of:	
Body Weight (Kg)	**Blood Volume (ml/Kg)**
1-2	100
>2	80

Tables have been adapted from: Howie, Stephen R.C. Blood Samples Volumes in Child Health Research: Review of Safe Limits. Bulletin of the World Health Organization. 2011;89:46-53.

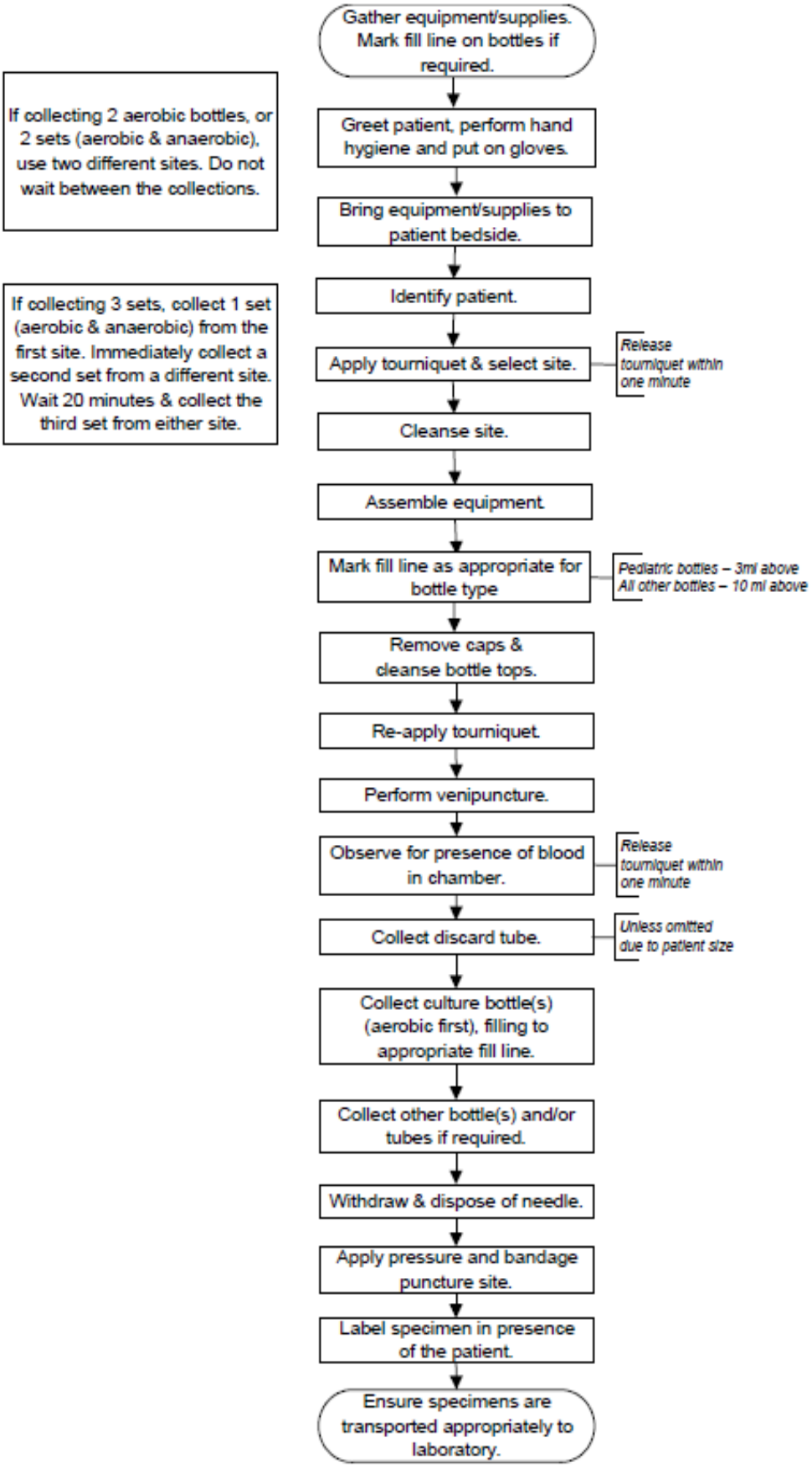
Appendix H: Venipuncture Site Cleansers

Situation	Cleanser	Site Cleansing
Routine venipuncture (no blood alcohol testing)	70% isopropyl alcohol	Cleanse with friction in outward, circular motion. Allow to air dry for at least 30 seconds
Blood culture collection	2% chlorhexidine gluconate with 70% isopropyl alcohol	Vertical, horizontal, circular. Allow to air dry for manufacturer's recommended duration.
Blood alcohol level	10% povidone iodine	Cleanse with friction. Allow to air dry for at least 30 seconds. Remove from patient's skin after the venipuncture procedure.
Allergy to topical alcohol	Strongest antiseptic solution the patient can tolerate. Consult with Infection Control if required.	As per antiseptic solution used.
Neonatal patient <34 weeks gestational age.	2% chlorhexidine gluconate aqueous solution	Cleanse with friction. Allow to air dry for manufacturer's recommended duration.
Neonatal patient ≥34 weeks gestational age	2% chlorhexidine gluconate with 70% alcohol	Cleanse with friction. Allow to air dry for manufacturer's recommended duration.

Appendix I: Blood Culture Bottle Selection for Pediatric Patients



Appendix J: Pediatric Blood Culture Collection



Replacing the Following District Health Authority/IWK Policies

Aberdeen 40664.39 100.002v2 Proper Procedure for Collection of Venous Bloodv2

Aberdeen 40664.43 100.005v2 Vacutainer Order of Draw

Aberdeen 40664.46 100.008v2 Difficult Draw

Aberdeen 40664.56 100.018v2 BD Vacutainer Push Button Blood Collection Set

AV – Guidelines for Laboratory Specimen Collections

AV – Phlebotomy Manual

CC 85-079 Venipuncture for Blood Specimen Collection

Colchester and East Hands Policies & Procedures Manual for Blood Collection Services

Cumberland Health Authority BCSOP 1.1 Phlebotomy Procedure

Cumberland Health Authority BBSOP 1.2 Specimen Collection Policy for BTS Testing Within the Cumberland Zone

IWK 1913.01 Venipuncture for Blood Specimen Collection

GASHA REF-SC-007 Sample Collection

GASHA 1-220 Emergency Department – Phlebotomy

SSH S20.3.005 – Venipuncture for Blood Collection

SSH S20.3.006 – Collection of Blood Specimens by Venipuncture using Needle and Syringe

SSR – F20.3.005 Specimen Collection: Order of Draw

SSR – F20.3.095 Protocol Greater Than 4 Attempts at Blood Specimen Collection Rev.2

SSR – F20.3.101 Phlebotomy Manual

SWH - Phlebotomy

YRH – PRE 22v3 Blood Culture Collections

YRH – PRE 30.20v3 Outpatient or Inpatient Blood Collection (Routine)

YRH – PRE 30.20-1E Quick Reference Guide Blood Collection

YRH – PRE 30.30 Blood Draws From IV Arm

Version History

Version:	Effective:	Approved by:	What's changed:
Original Approval Date: NSHA Dec. 20, 2019	**NS Health:** Sep. 20, 2021	**NSHA** VP Quality and System Performance	N/A

Version:	Effective:	Approved by:	What's changed:
Minor edits made 2021-08-20	Sep. 20, 2021	No approval required.	Minor clarifications to: • Procedure #13 (fourth box under Identification) • Procedure #27.3