|  |  |  |
| --- | --- | --- |
| **Collection of blood Samples from Patients with or suspected of having an Airborne High Consequence Infectious Disease (AHCID**, **eg COVID-19) and Transportation of blood Samples to the clinical Laboratory** | | |
| Document type | Identification code | Implementation date |
| Standard operating procedure | SOP-AIR-003 | 17 February 2020 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Version Number:** | | **1.0** | | |
| **1st Review Date:** | | **2 Years after effective date stated above** | | |
| **Reviewed and no changes required?** *(Please check the textbox to indicate if no changes are required after reviewing document. Initial and date in the appropriate review section)* |  | **Initials:** | **Date:** | |
|  | **2nd Review Date:** *(2 Years after the 1st review)* | | |
| **Initials:** | | **Date:** |
|  |  | **Valid until:** *(2 years after 2nd review)* | | |

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Name and job title** | **Signature**\* | **Date**\* |
| **Author** | Behzad Nadjm,  Consultant Clinician |  |  |
| **Reviewer**  (Optional) | Karen Forrest, Head of Clinical Services |  |  |
| **Approver** | Kalifa Bojang, Senior Research Clinician |  |  |

\* to be hand-written to indicate approval

|  |  |
| --- | --- |
| **Document** | **Specific location** |
| Master | Quality department |
| Electronic | Intranet |
| *Confidential, unauthorised copying prohibited* | |

# Purpose

* 1. This procedure describes the collection of blood samples from patients with, or suspected of, having an Airborne High Consequence Infectious Disease (AHCID) and transportation of blood samples to the laboratory.

# Scope

2.1 This SOP MUST be enforced for ALL AHCID Treatment Centre (TC) staff handling and managing patients with or suspected of having AHCID.

# Responsibilities

3.1 The head of Clinical Services Department (CSD) is responsible for the oversight and running of the clinical services department in which the TC is sited.

3.2 The lead AHCID doctor is responsible for training and overseeing the adherence to this SOP

3.3 All TC staff are required to observe all the applicable practices and procedures detailed in the SOP, attend training/drill sessions and report all incidents/accidents to the AHCID lead doctor.

# Procedure

|  |  |  |
| --- | --- | --- |
| **Section** | **Description** | **Person(s) Responsible** |
| 4.1.1 | Call the on-call laboratory staff, 30 minutes before sample collection so that the clincial lab can be prepared for sample reception. | TC Staff |
| 4.1.2 | **Assemble the following comprehensive set of equipment needed for the venepuncture from the store.**   1. 4 small transparent self-sealing plastic bags, 3 large transparent self sealing bags. Sharps container. 2. A phlebotomy kit containing vacutainer butterfly needles (green for adults, blue for children), vacutainer safety accessories (sample holder), tourniquet (single use), cotton swabs, 70% ethanol and plaster tape. 3. 5ml EDTA vacutainer tube, Biochemistry tube, blood culture (BC) bottle x2 (adults) x1 (Paediatrics). 4. 2 hand held 10% bleach solution sprayers.   (**Note 1**: 10% bleach solution=0.5% chlorine)   1. A rigid box (cooler) for specimen transportation. 2. Tissue paper. 3. The specimen tubes and BC bottles should be pre-labelled outside the side room and a biohazard or appropriate sticker affixed. 4. Staff entering the patient’s room must enter their names and the date/time of entry into the log book. | TC Staff |
| 4.1.3 | **A triple package system is used, with each layer disinfected with** 10% bleach solution (See Note 1)   1. The first layer (vacutainer/blood culture bottle) is the only one that enters the high-risk area. 2. All samples will be placed into a large self sealing bag in the patient room, this bag will be later discarded. 3. The vacutainer/BC bottle is then put into the second layer (the small self sealing bag for vacutainer, large self sealing bag for BC) in the low risk area. 4. Finally, the specimen is put into the third layer (the second self sealing bag) outside the anteroom and then into a hard specimen transfer box (eg cooler). | TC Staff |
| 4.1.4 | The doctor labels the Lab form correctly (outside the side room), and puts it in the plastic bag provided, then into the cooler box which is left outside with the staff who will take the sample to the lab.  If there is more than one patient, pre-label the tubes and write a list to follow as the patients are bled. | TC Staff |
| **4.2** | **Blood sample collection is done in the negative pressure room following the procedure specified below. Two clinical staff in full PPE with the addition of a second pair of gloves should be involved:** | TC Staff |
| 4.2.1 | Assess **SAFETY RISK** to you versus patient benefit before attempting a blood draw. There are situations when **NOT** to attempt a blood draw, for example inadequate PPE available or a combative patient. | ETC Staff |
| 4.2.2 | Ensure **appropriate lighting** and set up the blood draw area so equipment is easily within reach and placing the sharps container **directly** next to you.  Connect the vacutainer butterfly set to the vacutainer holder | TC Staff |
| 4.2.3 | **Discuss** the procedure with the patient. | TC Staff |
| 4.2.4 | Instruct your buddy to hold the labelled vacutainers and BC bottles | TC Staff |
| 4.2.5 | Disinfect the skin area where the blood draw will occur. Apply tourniquet proximal to insertion site. Hold the arm distal to insertion site with one hand, then place vacutainer needle into vein with the other. **Ensure** that your hand and your buddy’s hands are **not near** the needle insertion site. | TC Staff |
| 4.2.6 | Ask your buddy to remove the cap of the BC bottle and wipe with 70% ethanol before giving you the labelled BC bottles first, and push the tube firmly onto the covered vacutainer needle inside the vacutainer holder. This directly punctures the top of the tube allowing blood to be drawn into the tube by vacuum. Collect 8 -10 ml of blood (less for paediatric). Repeat this process with the other BC bottle if applicable, the EDTA and biochemistry tubes with appropriate blood volumes. Place these tubes in a large, sealable bag for transit into the anteroom (low risk area) | TC Staff |
| 4.2.7 | Remove tourniquet, remove the butterfly needle and apply firm pressure to the venepuncture site with dry cotton wool. Slide the yellow plastic safety cover over the needle and **discard the butterfly needle and vacutainer holder immediately** into the sharps container. | TC Staff |
| 4.2.8 | If the patient **bleeds profusely**, maintain direct pressure on the venepuncture site for five minutes, then secure a pressure pad with bandage and instruct the patient, if they are able, to maintain pressure over the site. | TC Staff |
| 4.2.9 | Place any non-sharps material used during phlebotomy in a biohazard bag and dispose as in waste disposal procedure (SOP-AIR-006). | TC Staff |
| 4.2.2 | When you have completed activities, move to the ante-room with the samples in the large sealable bag. | TC Staff |
| **4.3** | **Procedure for specimen packaging & transport.** |  |
| 4.3.1 | Remove the samples from the bag and discard it. Remove outer gloves. Decontaminate the vacutainer tubes and BC bottles with 10% bleach and wipe down with paper towel, put each tube separately in the second container (ie haematology sample , biochemistry sample and BC bottles individually in separate self sealing bags) with some tissue paper, seal it and then spray outside of bag. | TC Staff |
| 4.3.2 | Remove your PPE as per recommendation and leave the ante room |  |
| 4.3.2 | Place each self sealing bag directly in another, seal it. |  |
| 4.3.6 | Place each double packaged self sealing bag in the cooler box. Wash your hands. The cooler box should contain paper towels to soak up any spillage. The cooler is then covered. | TC Staff |
| 4.3.7 | The cooler is taken along with a hand held 10% bleach solution sprayer to the MRC Clinical Lab. | TC Staff |
| 4.3.8 | On reaching the clinical, go to the sample reception hatch and leave the samples with a member of staff, return with the cooler box. | TC Staff |
| 4.3.9 | The transport person then goes with the cooler box to the ward. The cooler box is decontaminated by spraying with 10% bleach. Clean the inside with water 10 minutes after this. | TC Staff |

# Appendices

|  |  |
| --- | --- |
| **Appendix number** | **Title** (as referenced on the appendix) |
| Appendix 01 | Document Version History |

# Attachments

|  |  |
| --- | --- |
| **Attachment number** | **Title** (as referenced on the attachment) |
| None |  |

# References

|  |
| --- |
| Public health England: MERS CoV Infection prevention and control guidance. 2016 |
| CDC Training Course: Preparing Healthcare Workers to Work in Ebola Treatment Units (ETUs) in Africa. |

**Appendix 01 Document Version History**

|  |  |  |  |
| --- | --- | --- | --- |
| **Version number** | **Change history** | **Author** | **Date** |
| 1.0 | New | Behzad Nadjm | 17 February 2020 |