COVID-19 Isolation Infirmary Guidance

Contents

Purpose:

To provide standardized guidance on setting up an infirmary for COVID-19 patients at an institution without an on-site infirmary. The purpose of establishing an infirmary within the institution is to provide medical care for hemodynamically stable isolated patient with mild to moderate COVID-19 symptoms. If the patient's needs exceed that capability of the institution, then the patient needs to be sent to the community hospital.

Definitions:

- **Infirmary**: a place in a large institution for the care of those who are ill. For the unit to be an infirmary, a minimum of 24 hour nursing coverage will be provided in the unit.
- **Cohort**: The practice of grouping patients who are infected with the same organism, to confine their care to one area, and prevent contact with other patients. They can be cohorted based on clinical diagnosis. Cohorting can also be done with staff; whenever possible, to limit further spread of the infection, the same staff should be assigned to provide the sole care for the cohorted patients. It is preferred not to cohort severely immunocompromised patients with other patients within the infirmary.
- **Isolation**: is utilized to separate symptomatic and presumptively ill patients from the rest of the population. All supplies and equipment that enter the isolation unit remain in the unit unless they can be disinfected. Otherwise, the supplies and equipment are utilized, and/or disposed of accordingly. This includes medications.
- **Quarantine**: is utilized to separate asymptomatic patients with a potential exposure to another individual that is ill from the rest of the population. If the patient in quarantine becomes symptomatic, they will need to be immediately moved to isolation. All supplies and equipment that enter the quarantine unit remain in the unit unless they can be disinfected. Otherwise, the supplies and equipment are utilized, and/or disposed of accordingly. This includes medications. Specific (b)(7)(E); (b)(7)(F) can be found on Sallyport.
- **Donning**: The systematic process of putting on Personal Protective Equipment (PPE) to ensure that the PPE provides the best protection
- **Doffing**: The systematic process of removing PPE to minimize the exposure to the external portion of the PPE that may be contaminated with infectious material.

General Guidelines for Infirmary Set-up:

- Patient Criteria for Admission in Consultation with the Clinical Director
  - Admission to and discharge from the infirmary only on the order of a physician or designated authorized health professional.
  - Follow the (b)(7)(E); (b)(7)(F) as posted on the COVID-19 Guidance page on Sallyport
  - COVID-19 patients (positive, probable, or suspected) with mild to moderate symptoms.
  - COVID-19 patients who are hemodynamically stable with mild to moderate symptoms requiring 2-3 liters of oxygen per nasal cannula to maintain O2 saturation above 90%.
  - COVID-19 patient post-hospitalization, that are still being treated as positive, which are hemodynamically stable requiring continued medical observations or treatment (e.g., IV antibiotics, oxygen…). Patients returning from the hospital that have completed treatment for COVID-19 infection, and have met the criteria for release from isolation, should not be placed in the isolation infirmary.

- Staffing Pattern
  - The team may comprise of six members including, one Medical Officer, one Advanced Practice Provider (APP), and four Registered Nurses (RN) per 5-10 bed infirmary based on the patients' medical acuity. Infirmary bed estimates generally range from 0.5 to 1 percent of the population (i.e., 5 to 10 medical infirmary beds per 1,000 inmates).
  - A Medical Officer should be on call 24 hours per day for the infirmary.
  - A Medical Officer should evaluate patients daily as required by the severity of their illnesses.
  - At least two RNs per shift: this will allow for continuous coverage of the unit in case one RN has to step off the unit for any reason, as well as allow the RNs to watch out for breaks in PPE in each other.
  - Health personnel on duty 24 hours per day, seven days per week, who make rounds a minimum of once per shift and more often as required by patients' needs and physicians' orders. A healthcare provider is to remain in the infirmary at all times.
  - Patients within sight or hearing of a health care staff member (e.g., call lights, buzzer system)

- Location:
  - Each institution varies, and coordination with the local executive staff will be necessary to determine a suitable location.
  - The location of the isolation infirmary unit can be co-located with the isolation unit.
  - The institutional pandemic plan, in consultation with facility's personnel, will identify a location; the gymnasium, religious service, or visitation room are a few locations to consider for an infirmary. In addition to structures in place at the institution, the institution may also consider utilizing large temporary structures, like tents.
  - Housing Units can be utilized for Isolation in this order of precedence as determined by the CDC Guidance:
    - Separately, in single cells with solid walls (i.e., not bars) and solid doors that close fully
    - Separately, in single cells with solid walls but without solid doors

        - As a cohort, in a large, well-ventilated cell with solid walls and a solid door that closes fully. Employ social distancing strategies related to housing in the Prevention section above.
        - As a cohort, in a large, well-ventilated cell with solid walls but without a solid door. Employ social distancing strategies related to housing in the Prevention section above.
        - As a cohort, in single cells without solid walls or solid doors (i.e., cells enclosed entirely with bars), preferably with an empty cell between occupied cells. (Although individuals are in single cells in this scenario, the airflow between cells essentially makes it a cohort arrangement in the context of COVID-19.)
        - As a cohort, in multi-person cells without solid walls or solid doors (i.e., cells enclosed entirely with bars), preferably with an empty cell between occupied cells. Employ social distancing strategies related to housing in the Prevention section above.
    - Ideally the location will have a sink with running water, soap, and paper towels. If this is not feasible, ensure adequate alcohol based hand sanitizer is available.
    - The attached schematic (Appendix 1) is scalable based on needs of the institution. The important items to remember when scaling are the spacing requirements:
        - Consider utilizing a location that is large enough to house the patients and their necessary belongings. Each patient should have ~72 sq ft (12' L x 6' W) to ensure that there are at least six feet of distance between patients and safe walkways of at least three feet between the head and foot of the bed.
        - Ensure that there is at least a six foot wide egress aisle for safe evacuation of the unit if necessary.
    - Ideally, the locations should have a dedicated entrance location with a **separate exit** location.
        - The entrance/exit locations require space for donning and doffing of PPE, as well as a means of performing hand hygiene.
        - Proper donning of appropriate PPE will be completed prior to entering the unit
        - Proper doffing of PPE will be completed upon exiting the unit.
    - Access to toilets and shower facilities for patients, and toileting facilities for staff
    - If space is utilized that does not have emergency lighting, portable emergency lighting will be needed.

- Necessary Supplies (In addition to the Suggested Infirmary Supply and Equipment List identified in Appendix 2):
    - Keys for the unit being utilized
    - Signage:
        - Identifying the type of required precautions:
            - (b)(7)(E); (b)(7)(F)
        - Educational signage from Sallyport
            - (b)(7)(E); (b)(7)(F)

- (b)(7)(E); (b)(7)(F)
- Cough Etiquette
- Hand Hygiene ((b)(7)(E); (b)(7)(F)
- (b)(7)(E); (b)(7)(F)
    - A mechanism to separate patients in the absence of walls when privacy is necessary: Foldable panels, privacy screen, a sheet draped between the beds, etc.…
    - Stocked hand hygiene station(s): running water, soap, paper towels, and/or alcohol based hand sanitizer
    - PPE: sufficient supply of gowns, gloves, N95 mask, goggle, and face shields in multiple sizes
    - Dedicated computer terminal(s) for healthcare providers to document and review information on the patients
    - Telephone:
        - If able to secure, then a regular phone with access to dial outside of the institution should be utilized.
        - If unable to secure; the telephone will ring directly to Control, like suicide watch phone; this phone would be available for staff working in the unit to receive phone calls, and prevent an inmate from accessing the phone to make a call outside of the institution.
    - Cleaning supplies: EPA registered disinfectant, mop and mop bucket, broom and dustpan, etc.…
    - A mechanism to properly secure items on the unit:
        - Needles, sharps, syringes – behind two locks
        - Medication – behind at least one lock
    - Dedicated non-critical medical equipment: vital signs machine, stethoscope, non-touch and oral thermometers, pulse oximetry device, blood glucose meter, etc. These will need to be disinfected appropriately, following the manufacturer's recommendations, between patients if supplies do not allow for one device per patient. The local medical and dental cleaning and disinfection plan should be followed.
    - Laundry: Water-soluble bags and yellow infectious linen laundry bags

- Cleaning and Disinfecting of the Unit
    - Cleaning will be completed in accordance with the guidance provided on (b)(7)(E); (b)(7)(F) (b)(7)(E); (b)(7)(F) on Sallyport
    - Consider utilizing inmate orderlies to assist with cleaning duties
        - Will REQUIRE training on proper donning and doffing of PPE, to include hand hygiene
        - Training will need to be documented (Initial Job Orientation)
        - PPE is non-optional for orderlies
    - Pay special attention to the high touch areas within the unit
        - Phone: Wipe with an EPA approved disinfectant after each use
        - Computer Keyboard and Mouse (Preferably a mouse that does not need a mousepad)

- Wipe with an EPA approved disinfectant after each use
- Can consider utilizing a product that covers the keyboard
  - Disposable: i.e. plastic wrap
  - Re-usable: Keyboard covers

- Keys: Should be wiped down each shift
- Duty Belt:
  - Consider a non-porous belt that can be cleaned each shift.
  - Belts could be created by combining two key chains (dog collars) together and adding a clip. The clip would have to be able to connect into the loops on the chain to be adjustable for the person.
- Radio:
  - Do not speak into the radio with your mouth on the microphone.
  - Wipe with an EPA approved disinfectant after each use

Documentation:

- Documentation should occur in BEMR.
  - Health Services should work with the local computer services and facilities to provide additional computer terminals where needed.
  - Paper documentation
    1. Creates gaps in the patient record and prohibits the capture of data needed for the COVID-19 reporting requirements
    2. Leads to potential medical/medication errors
    3. Creates a vehicle for transmission of the COVID-19 virus (minimal paper should be used because it cannot be easily disinfected)
- At a minimum, vital signs should be done every 12 hours. Vital signs should include a pulse oximetry measurement.
- Complete documentation in BEMR, including infirmary admission and discharge notes, along with daily clinical encounter notes

Communication Equipment:

- Telephone
- Radio

Pharmacy:

- Stock of individually bottled Over-the-Counter items to treat symptoms; a provider with prescribing authority will need to document an order for the patient to receive these items, or a nurse and paramedic may utilize approved protocols.
  - Examples include, but are not limited to:
    1. Acetaminophen
    2. Ibuprofen
    3. Cough Medicine
  - The Clinical Director can modify this list to meet the needs of the patient population
- Necessary medications for the patient's chronic medical condition
  - Only keep a days, maybe two days, worth of medication in the unit.

References:

2007/2008 APIC Emergency Preparedness Committee. Infection prevention and control for shelters during disasters. Retrieved from https://apic.org/Resource_/TinyMceFileManager/Practice_Guidance/Emergency_Preparedness/Shelters_Disasters.pdf

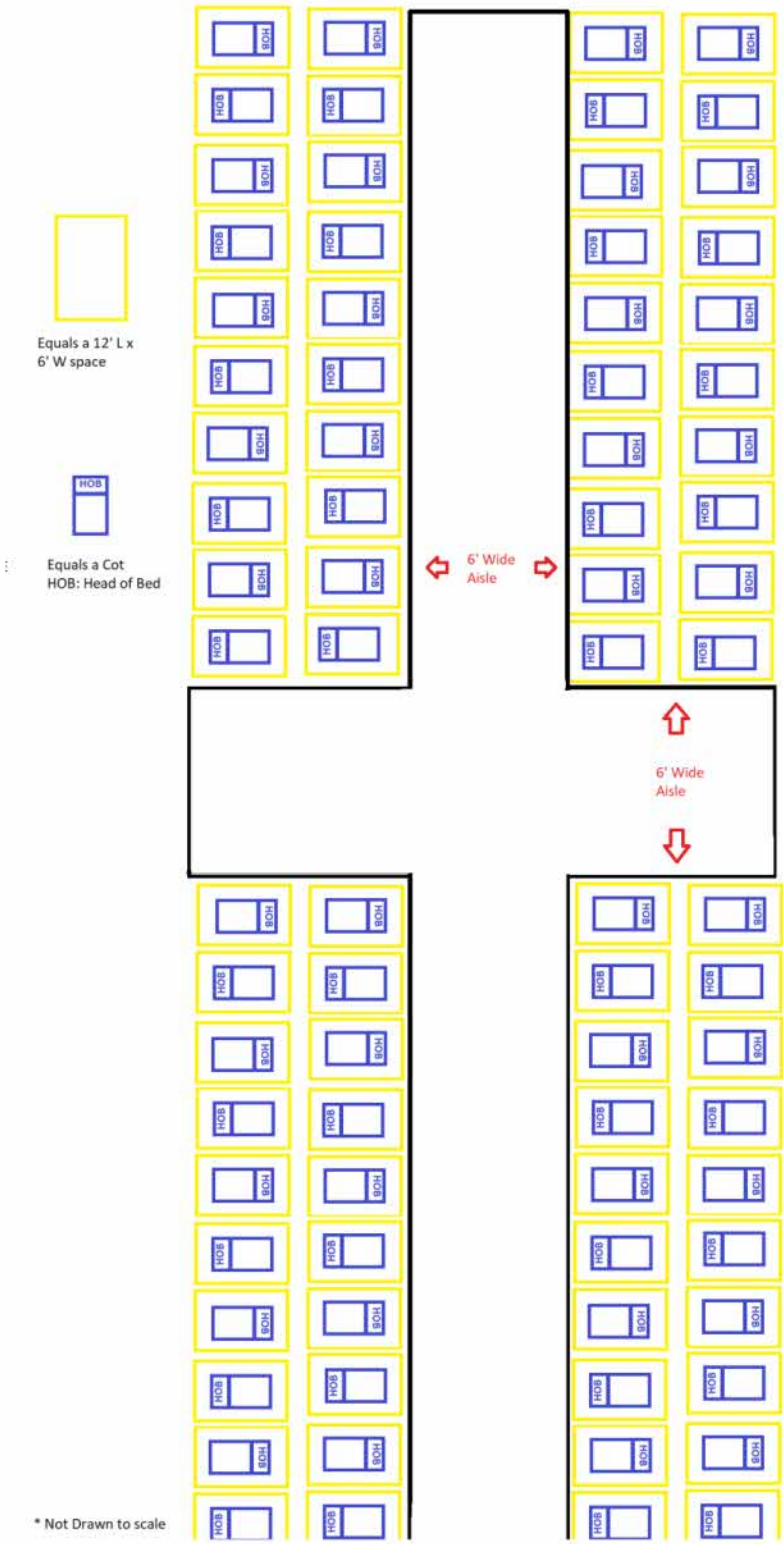
Anno, B. J. (2001). Correctional health care: Guidelines for the management of an adequate delivery system, 2001 edition. *Chicago, IL: National Commission on Correctional Health Care*.

The Centers for Disease Control and Prevention (CDC, 2007). Guideline for isolation precautions: Preventing transmission of infectious agents in healthcare settings. Retrieved from https://www.cdc.gov/infectioncontrol/guidelines/isolation/prevention.html

The Federal Bureau of Prisons (2020). Guidance on COVID-19. Retrieved from

(b)(7)(E); (b)(7)(F)

Appendix 1: Sample Infirmary Set-up



Appendix 2: Suggested Infirmary Supply and Equipment List

SUGGESTED INFIRMARY SUPPLY AND EQUIPMENT LIST			
INTRAVENOUS DELIVERY:			
Item	**Need**	**Item**	**Need**
IV starter kits		IV poles	10
Transparent Dressings (i.e. Tegaderm, Opsite)		IV fluids (NS, 1/2NS, LR, 1/2NS or NS with 5% Dextrose)	
Clear & paper tape		IV tubing sets & extension	
IV catheters (16, 18 & 20 gauge)		Alcohol wipes	
3 cc syringes			
OXYGEN DELIVERY:			
O2 tanks with roller stand holder		Bag Valve Mask	
Oxygen concentrator Christmas trees		Non-rebreather mask	
Oxygen cylinder key		Nasal Cannula	
O2 concentrators		Simple face mask	
Portable suction machine		Albuterol Multi-dose Inhalers (note nebulizers are not recommended)	
Yankauer suction set - tubing & canister			
MISCELLANEOUS:			
PPE (gowns, gloves, eye protection, masks)		Vital signs monitors	10
Cots, Pillows and Blankets		Thermometers (oral & touch free)	
Tall large trash cans	5	Probe Covers for oral thermometer	
Influenza Testing Supplies or Kits		Portable Pulse Ox machines	
COVID Testing Supplies or kits		Patient scale	1
EPA registered disinfectant wipes		Glucometer w/ testing supplies	
EPA registered disinfectant solution		Stethoscopes	
Hand wash stations		Oral Fluid Supplement (ORS, Gatorade)	
Hand sanitizer		Bed Wedges	
Automated External Defibrillator (AED)	1	Stretcher, backboard and wheel chair	
Portable cart for nurse to provide care at bedside or cell to cell		Refrigerator or Cooler (hold potential samples)	

COVID-19 CHECKLIST TOOL

ISOLATION CHECKLIST COVID-19	
Move to Isolation • **Symptomatic**	**Isolation** is used to separate inmates who are sick from quarantined asymptomatic or general population inmates. For inmates presenting with symptoms of COVID-like illness (e.g., **Fever, cough, shortness of breath)**: Place a surgical mask on the patient and minimize proximity to staff and other inmates. Escort (in PPE) to designated isolation or cohorted housing area.
Implement Transmission Based Isolation Precautions Standard/Contact/ Eye Protection/Droplet (PPE)	***Standard precautions/Contact/Eye Protection/Droplet*** 1) Hand hygiene (before gloving and after removing gloves) 2) PPE (gloves, gown, eye protection, N-95 or surgical mask*), for entry into room, direct contact escort or open grid units. 3) If not entering room and ≥ 6 feet away, utilize standard precautions – gloves (e.g. place food container in food slot while inmate stands at back of room). **-Prior to room entry:** Perform hand hygiene. Apply (don) gloves, gown, fit-tested respirator (N-95) or surgical mask* and eye protection. *See donning checklist.* **-Upon room exit with Anteroom:** Have inmate(s) move to a social distance ≥ 6 feet, if possible, and remove gloves and gown, dispose, and then exit room. Perform hand hygiene, remove (doff) eye protection, N-95 respirator or mask* and repeat hand hygiene. **If no anteroom is available, exit out of room to doff all PPE in a designated doffing area (tape off area for doffing) located immediately outside of room.** *See doffing checklist.* * Surgical mask is used if no respirators are available.
Signage	A Respiratory Precaution Isolation Sign is placed on the door.
Inmate Education	Advise/educate inmate regarding possible COVID-19 illness and testing. Educate regarding social distancing and wear of mask when a staff member enters the room or if the inmate leaves the room. Provide education sheet.
Communication	1) Report case(s) to local facility leadership, infection prevention and control (QIIPC), public health authority and Regional QIIPC Consultants. 2) Communicate with the Regional Medical Director to determine if COVID-19 testing is applicable. See manufacturers/commercial guidelines for testing. Communicate with local public health authority to report positive test results. 3) If inmate condition deteriorates (respiratory distress) and emergent transportation to local hospital is necessary, call ahead for guidance and direction before transfer. **DO NOT** transport without first notifying receiving hospital.
Documentation	Place inmate on medical hold in BEMR and Sentry for the duration of the isolation. **Initiate RIDs. Code as Z0489-c19** in BEMR. Document inmate status daily in BEMR, any testing results and change in condition.
Staff Interaction	Visits with staff not requiring direct contact will be conducted with social distancing ≥ 6 feet away or with inmate(s) masked. Limit the number of staff interactions with ill inmate(s) and take measures to reduce rotation of staff interacting with isolated inmate(s). Dedicate personnel if possible.
Medical Equipment and Medical Care	Medical equipment should be dedicated to area, if possible. Supportive care with frequent assessment for SOB or decompensation. Have preparations in place for transfer if needed.
Food Service	Regular trays or use disposable dish wear. Wear gloves and maintain social distancing. Dispose of in regular trash.
Laundry	Wear gloves. Do not shake dirty laundry. Double bag out of isolation to laundry. Wash in hot water and dry. Disinfect dirty carts after use.
Visits	In person visits will be suspended until the end of isolation. Consult local leadership for exceptions.
Telephone Calls	Phone should be cleaned and disinfected with disposable towel & product from EPA List N.
Trash	For disposal of trash wear gloves and **double bag** in clear waste bags and dispose with regular trash, but ensure it is not processed by recycling.
Cleaning/Disinfection	The inmate(s) are daily provided supplies to clean/disinfect room. Ideally, cleaning is performed at time of inmate care to prevent additional entry into room. Utilize disinfectant from EPA List N.

COVID-19 CHECKLIST TOOL

D/C of Isolation	Discontinuation of isolation should be based on:
	Symptomatic patients with COVID-19 should remain in Transmission-Based Precautions until **either**:
	• *Symptom-based strategy*
	  ○ At least 3 days (72 hours) have passed *since recovery* defined as resolution of fever without the use of fever-reducing medications **and** improvement in respiratory symptoms (e.g., cough, shortness of breath); **and**,
	  ○ At least 14 days have passed *since symptoms first appeared*
	• *Test-based strategy*
	  ○ Resolution of fever without the use of fever-reducing medications **and**
	  ○ Improvement in respiratory symptoms (e.g., cough, shortness of breath), **and**
	  ○ Negative results of an FDA Emergency Use Authorized COVID-19 molecular assay for detection of SARS-CoV-2 RNA from at least two consecutive respiratory specimens collected ≥24 hours apart (total of two negative specimens) [1]. See Interim Guidelines for Collecting, Handling, and Testing Clinical Specimens for 2019 Novel Coronavirus (2019-nCoV). Of note, there have been reports of prolonged detection of RNA without direct correlation to viral culture.
	
	Patients with laboratory-confirmed COVID-19 who have not had any symptoms should remain in Transmission-Based Precautions until **either**:
	• *Time-based strategy*
	  ○ 14 days have passed since the date of their first positive COVID-19 diagnostic test, assuming they have not subsequently developed symptoms since their positive test.
	• *Test-based strategy*
	  ○ Negative results of an FDA Emergency Use Authorized COVID-19 molecular assay for detection of SARS-CoV-2 RNA from at least two consecutive respiratory specimens collected ≥24 hours apart (total of two negative specimens). Note, because of the absence of symptoms, it is not possible to gauge where these individuals are in the course of their illness. There have been reports of prolonged detection of RNA without direct correlation to viral culture.

Terminal Cleaning	When the decision to discontinue isolation is made, the inmate, if possible, should perform a terminal cleaning. Then after 24 hours (if possible), the isolation area should be cleaned again with an EPA List N registered disinfectant while wearing gloves, gown and any other PPE recommended by the disinfectant manufacturer and based on condition of the room (i.e., if splashes are anticipated, wear mask and eye protection).

COVID Isolation Flowchart

INMATE POPULATION

The goal is to identify and **isolate** "sick" inmates from the population

Define Sick:

- Fever >100.4
- Cough
- Shortness of breath
- Loss of smell
- Extreme fatigue
- Body aches
- Headache
- GI Symptoms

SICK

Having 4 areas for isolation is best practice. The minimum requirement is an isolation area

Inmate symptomatic with a COVID-19 test pending

Inmate symptomatic with a positive COVID -19 test

Inmate symptomatic with a negative COVID-19 test

Inmate asymptomatic with a positive COVID -19 test

Isolation is a 14 day or longer duration in a secure physical environment which has a controlled entry point and a physically separate area attached for the donning and doffing of PPE.

Post Isolation

Can be transferred to the Post Isolation Recovery area when they meet the CDC guidelines.

POST COVID-19 RECOVERY AREA

This is a defined separate physical area where inmates can maintain social distancing and recover.

Time in the post COVID-19 Recovery area can vary dependent on the needs of the institution. Generally, 7-14 days is recommended .

Post Recovery

Back to general population