Intermountain® Healthcare

CLINICAL GUIDELINE MARCH 2020

COVID-19 Imaging Guidelines

INTRODUCTION

The purpose of this document is to establish guidelines when considering the use of medical imaging in the clinical evaluation of patients with known or suspected COVID-19 illness. Safety of our patients, caregivers, and the community is our top priority. This document describes the current recommendations for imaging testing, appropriate isolation practices, safe transportation of patients, and cleaning of equipment.

BACKGROUND

As the COVID-19 situation evolves within the United States, it is important to keep focus on value-based principles and ensure resources are expended appropriately. While early data from the Hubei province in China suggested promising sensitivity of Chest CT in the identification of characteristic opacities prior to positive viral testing for COVID-19 [1-7], particularly as in the earlier stages viral testing wait times provided an additional diagnostic challenge, these findings are considered non-specific and overlap with other infections such as influenza, H1N1, SARS, and MERS. [8]

Current CDC guidelines do not recommend CT and Chest Xray as a means to diagnose or differentiate COVID-19 from other respiratory illness, and indicates viral testing as the only specific means of diagnosis. [9]

IMAGING GUIDELINES

The following recommendations are supported by the American College of Radiology and the Radiological Society of North America:

- Chest imaging, specifically CT and chest x-ray, should NOT be performed to diagnose COVID-19 illness or differentiate it from other respiratory disease.
- Chest imaging should only be performed on patients who have clinical symptoms appropriate for referral for imaging study.
- The appropriate type of chest imaging should be determined based on the clinical signs and symptoms of the patient and should only be performed for cases in which the findings will decide or change appropriate management of the patient.
- In the inpatient and Emergency Department (ED) setting, portable 1-view chest x-ray should be utilized over transporting patients to the imaging department for routine 2-view chest x-ray.
- CT imaging should be utilized with heightened discretion as this always requires transport of the patient through the hospital to the Imaging department.

OUTPATIENT IMAGING PROCEDURES

Similar to the ED and inpatient environment, chest imaging should be utilized based on appropriate clinical signs and symptoms and **not as a means to screen patients or differentiate COVID-19 from other respiratory disease.**

- **Patients with respiratory symptoms should don a mask prior to arriving at the facility.** This should be communicated to the patient during advance registration. Patients without masks will immediately be provided with one on arrival at the facility.
- **Patients presenting to imaging departments for any outpatient examination will be subject to current Intermountain COVID-19 screening guidelines** to assess for variable or high risk illness and may be sequestered, or subject to other patient routing directives, including deferral of imaging if indicated.

Providers with questions about imaging appropriateness should call their local imaging department for assistance.

REFERENCES

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READYING THE PATIENT FOR IMAGING

1. **Ordering imaging testing.** Providers should order imaging testing in the normal fashion according to signs and symptoms. Isolation status should be indicated on the order as per standard iCentra workflow expectations. (Please note that iCentra imaging exams specific to COVID-19 have been removed from the system. Traditional exam orderable codes should be used.)
2. **Patient isolation.** Known or suspected COVID-19 patients should be placed in the appropriate isolation according to the current Intermountain infection control guidelines:
   - Doplet / Contact + Eye Protection — Handout — Video
   - Airborne / Contact N95 + Eye Protection — Handout — Video
   - Airborne / Contact PAPR — Handout — Video
3. **Communication with the Imaging department:** Providers and key clinical staff should communicate the isolation status of the patient through established communication channels and in clear terms. Communication of isolation precautions apply to both the ED and inpatient settings.

   Careful coordination is needed with the imaging department for patients requiring airborne isolation in order to accommodate needs for appropriate staff response (when performing exams portably) and for room decontamination (when transporting the patient to the Imaging department).

TRANSPORTATION

Caregivers must observe appropriate isolation and transportation guidelines as established by Intermountain Infection Control and the Office of Patient Experience when dealing with known or suspected cases of COVID-19 illness.

IMAGING-SPECIFIC INSTRUCTIONS: PERSONAL PROTECTIVE EQUIPMENT (PPE)

All caregivers participating in imaging studies (either portable or in-department) must follow appropriate PPE guidelines according to **current Intermountain Infection Control**.

Lead apron shielding and isolation precautions:

Caregivers who must wear lead aprons (including thyroid shields) during x-ray procedures requiring isolation should follow these guidelines:

- Don the lead apron first, followed by the PAPR (if used), and then the isolation gown.
- Doffing should happen in reverse. Lead aprons should be disinfected after each use with an appropriate disinfectant.

Non-cleanable caregiver thyroid shields should NOT be used in cases involving airborne, droplet, or contact isolation as they cannot be cleaned appropriately between patient use.

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