Kingston Health Sciences Centre
Centre des sciences de la santé de Kingston

Protected Internal Activation of Acute Stroke Protocol for Patients with Suspected or Confirmed COVID-19 April 16, 2020

There are Stroke complicated COVID-19 in 5.9% of patients at median 10 days after symptom onset.

- **Number of Protected Acute Stroke Protocol (ASP) Team = 1 physician (Attending Neurologist or Resident) and 1 Inpatient Unit RN + 1 RACE RN +/- 1 RACE Physician or Intensivist.**
- **Protected ASP Team & "Clean" Runner & Porter to keep mask and face shield on throughout.**

A. Inpatient Unit

1. FAST stroke signs recognition. RN pages Resident or Attending Physician or NP on call stat re Stroke signs and COVID status-suspected or confirmed. If Paediatric Inpatient –Page Paediatric Intensive Care Service Attending On-Call & Senior Resident.
2. Resident or Attending or NP dons PPE before entering room and assesses patient.
3. Resident or Physician or NP calls Switchboard at 4444 to activate the Protected Internal Acute Stroke Protocol (suspected or confirmed COVID-19) and Bed location (XXXX).
4. Switchboard contacts ASP list with added communication of "Protected" Internal Acute Stroke Protocol and Bed Location (XXXX).
5. Only those essential to the Protected Acute Stroke Protocol enter patient's room.
6. Protected ASP Team entering patient's room don PPE as per IPAC policy before entering the Room: Mask, Face Shield, Gown & Gloves. If PPE not located on cart beside patient's room, ask Charge RN. Some team members may bring their own PPE.
    a. If high risk respiratory procedure is needed (intubation or CPR), RACE team RN and RACE Physician, Anesthesia Staff or Senior Resident, & RT dons Airborne PPE- N95, bouffant, face shield with drape, gown, & gloves; Neurology will not be involved with intubation.
    b. If patient is intubated, Kidd 2 ICU intensivist and Charge RN are notified. If after hours and patient is unstable, notify ACO.
7. Inpatient Unit Resident/Attending or NP & Inpatient RN gives report to the Protected ASP team.
8. Protected ASP Physician (dons PPE) conducts rapid assessment using NIHSS or Simplified Stroke Exam (Appendix 1). Protected ASP Inpatient RN +/-RACE nurse (dons PPE) establishes 2 IVs (unless previously started) +/- bloodwork (in ASP package) and places monitor.
9. Place yellow procedure mask & clean sheet on patient before transport to CT. Mask kept on. Patient should be transferred to clean stretcher to Kidd/Davies Elevator 3 or 4.
10. Call CT before leaving to ensure they are ready.
11. Clean "runner" to obtain pump & will go ahead opening doors & pushing elevator buttons. Protected ASP Inpatient RN + Porter, if available (dons PPE) +/- Protected ASP Physician (if Porter not available) +/- RACE RN transport patient. Clean provider pushes RACE cart.

B. Imaging

1. CT console room should be kept clear as possible of extra staff.
2. 1 CT tech dons PPE. Protected ASP Inpatient RN +/- Porter +/- Protected ASP Physician or RACE RN + CT tech place patient on CT table. CT Tech hooks up injector for contrast.
3. CT Tech & physician remove gown & gloves in CT ante-room laundry basket (back into closed door to open door). Protected ASP Inpatient RN + Porter (if available) +/- RACE RN keep PPE on and stand in anteroom or hallway as directed. RACE RN goes into console room if "clean".
4. Non-Contrast CT and +/- CT Perfusion using RAPID.
5. If tPA to be given, Protected ASP RACE RN or physician prepares bolus. Physician or Resident dons gown and gloves & administers bolus. RACE RN prepares infusion then dons gown & gloves

(if not already wearing) & starts infusion. Patient is transferred to stretcher by Protected ASP physician + RACE RN +/- porter and moved into hallway. Physician removes gown & gloves (if not done already) & reviews rest of CT images either in CT console room or via cell phone.
If tPA is not given, Protected ASP Inpatient Unit RN + porter (if available) +/- RACE RN (dons PPE if porter not available & if not already wearing PPE) transfer patient to stretcher while physician remains "clean."
Prior to move over to stretcher, CT tech disconnects CT contrast & dons PPE as necessary.

C. Transfer from Imaging

- Notify receiving location prior to transfer.
- Protected ASP Attending physician or Resident remains "clean" and carries chart, opens doors & pushes elevator buttons. Protected ASP Inpatient RN +/- Porter (if available) +/- RACE RN dons gown and gloves (if not already wearing).
  - **If IV tPA only:** patient will be transferred back to D4ICU bed ASAP by Protected ASP RACE RN + Inpatient RN +/- porter (if available). Patient may need to go back to Inpatient unit to wait until D4ICU is ready. If intubated, aim to transfer patient to K2ICU ASAP with RT, Critical Care RN + Porter who have donned PPE.
  - **If NO EVT or tPA:** patient will be transferred back to Inpatient Unit (if stable) by Protected ASP Inpatient RN +/- RACE RN (if porter not available) + Porter (if available).
  - **If EVT,** patient transfers to IVR when IVR ready by Protected ASP Inpatient RN + RACE RN +/- porter (at times patient may need to go back to Inpatient unit to wait if not ready-after hours).

D. EVT Procedure in IVR

1. IVR Team assisting with IVR procedure dons PPE. Protected ASP Inpatient RN + RACE RN assists IVR team with transferring patient to IVR procedure bed & provides report to IVR team and D4ICU RN if present. Inpatient RN can then leave removing gown & gloves. Protected ASP RACE RN can leave if D4ICU RN present and report given to D4ICU RN. Protected ASP physician or resident dons lead apron, gown and gloves to assist if necessary.
2. Patient is prepped-needs clean gown. Insert Foley Catheter if needed.
3. EVT procedure completed (If patient becomes unstable apply 100% oxygen with non-rebreather mask, activate code 99 anesthesia if RACE MD not present. Positive pressure ventilation should be avoided unless absolutely required (then do hand hygiene, don airborne PPE on before bagging patient) (also applies in DI)).
4. IVR team transfers patient to D4ICU or K2ICU bed/stretcher.
5. Critical care RN & Protected ASP physician or porter transferring patient to Critical Care don PPE. Designate 1 clean staff to carry patient chart, open doors, & to touch elevator button-Kidd/Davies Elevator 3 or 4.

E. Post EVT Management

1. Patient requires care in D4ICU or K2ICU (ventilated cases) as soon as possible post EVT +/-tPA.
2. After intensive monitoring is no longer needed, patients are transferred to the COVID-19 Isolation Unit if COVID-19 positive as per the Bed Allocation Team.

Appendix 1

Simplified Stroke Examination

1. Impaired level of consciousness? Yes or No.
2. Gaze towards one side? Yes or No.
3. Sees hand waving on both the left and right side? Yes or No.
4. Able to raise arm to 45 degrees for 10 seconds without drift? Yes or No.
5. Able to straight leg raise with heel 6 to 12 inches off bed? Yes or No.
6. Speech impaired? Yes or No.
7. Feels tap on left shoulder? Yes or No.