QUIZ 12th August 2020 (answers below)

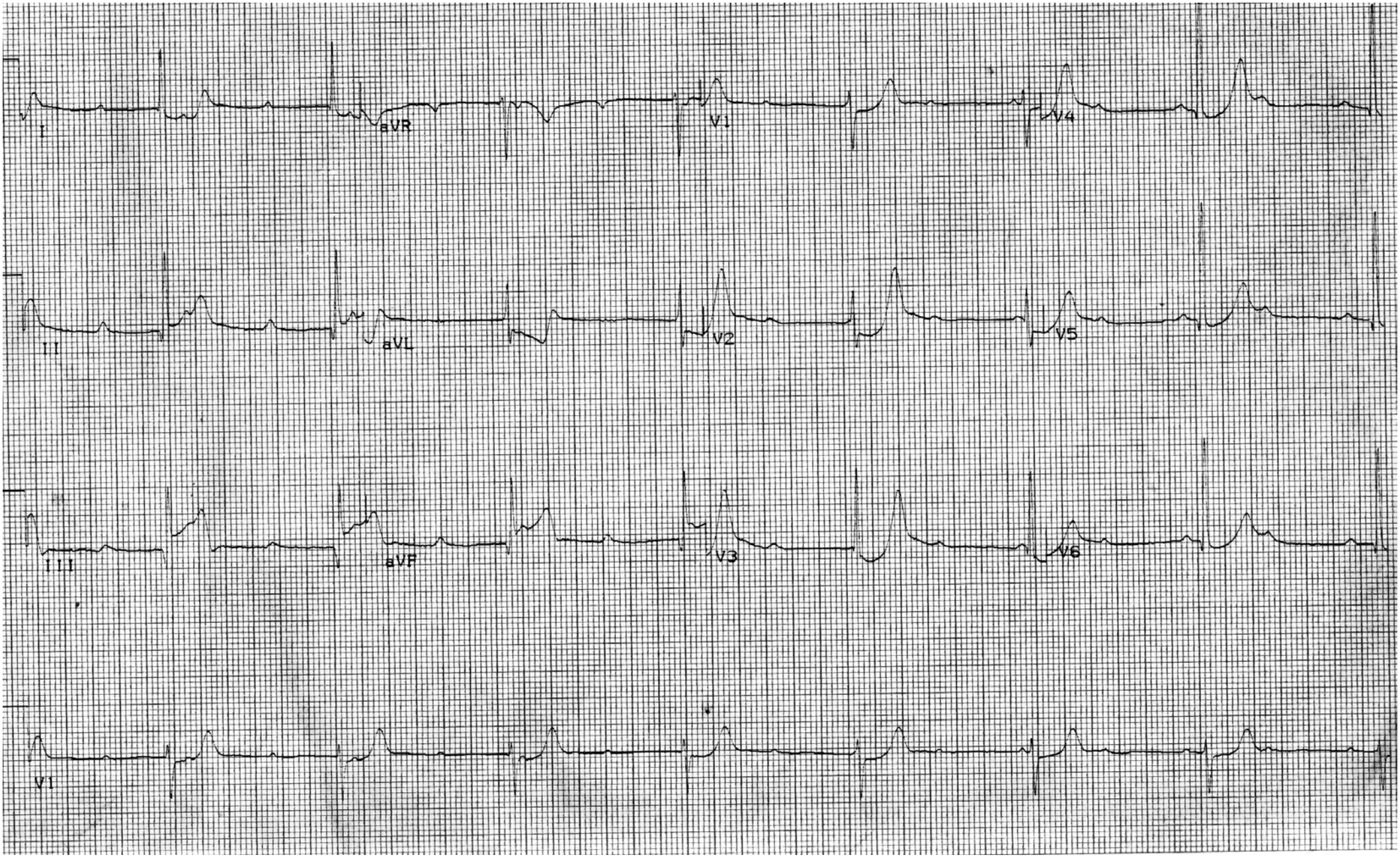
1. **Which aerosolising procedures have been reported as increasing the risk of acute respiratory illness transmission to health care workers?**

2. **What is the correct donning procedure for aerosol PPE?**

3. **What is the correct doffing procedure for aerosol PPE?**

4. **How do you minimise respiratory pathogen transmission during intubation?**

5. **Describe and interpret the following ECG.**


I
aVR
V1
V4
II
aVL
V2
V5
III
aVF
V3
V6
V1

QUIZ answers 12th August 2020

1. **Which aerosolising procedures have been reported as increasing the risk of acute respiratory illness transmission to health care workers?**

    - *Intubation*
    - *Non-invasive ventilation*
    - *Tracheotomy*
    - *Manual ventilation before intubation*

    Other aerosolising procedures hypothesised to increase risk of transmission include:

    - *Endotracheal aspiration*
    - *Suction of body fluids*
    - *Bronchoscopy*
    - *Nebulizer treatment*
    - *Administration of O_2*
    - *High flow O_2*
    - *Manipulation of O_2 mask or BiPAP mask*
    - *Defibrillation*
    - *Chest compressions*
    - *Insertion of nasogastric tube*
    - *Collection of sputum*

2. What is the correct donning procedure for aerosol PPE?

ST VINCENT'S HEALTH NETWORK SYDNEY

Resource updated: 27th April, 2020

Sequence for putting (donning) on PPE in ICU for COVID-19 suspected/confirmed cases

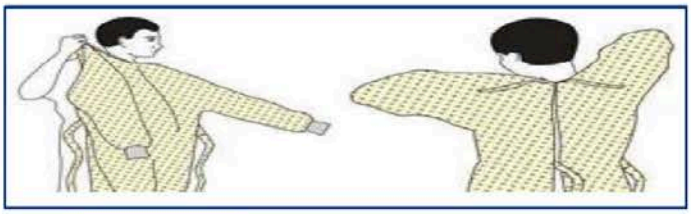
Put on PPE before patient contact and generally before entering the patient room

To ensure safe use of PPE, having a "PPE buddy" is recommended during the donning procedure

1 **Hand Hygiene**
Wash hands or use an alcohol-based hand rub

2 **Gown**

- Fully cover torso from neck to knees, arms to end of wrist and wrap around the back
- Fasten at the back of neck and waist



3 **P2/N95 Mask**
Secure elastic bands at middle of head & neck

P2/N95 mask for airborne precautions: required for aerosolised generating procedures (i.e. Nasopharyngeal Swabs, Code Blue events, Bag Valve Mask ventilation, High flow Nasal Prongs, nebuliser administration, non-Invasive Ventilation, intubation, extubation and tracheostomies).

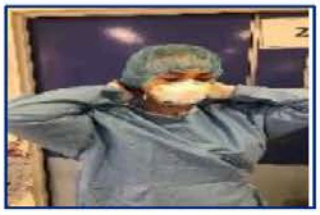
Perform 'fit check' each time a P2/N95 mask is worn

4 **Hair Cover**

- Put on hair cover from front to back

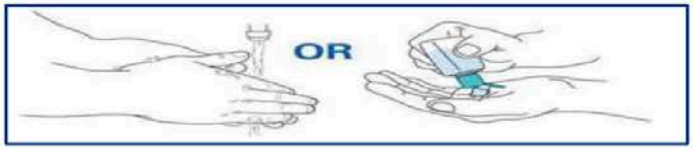
Hair covers are considered to be optional outside of ICU and the Operating Theatre

Long hair should be neatly tied back



5 **Face Shield or Protective Goggles**
Place over face and eyes and adjust to fit

6 **Hand Hygiene**
Wash hands or use an alcohol based hand rub



7 **Gloves**
Extend to cover wrist of gown

8 **NOW YOU ARE SAFE TO ENTER THE ROOM**

References:

- Australian Guidelines for the Prevention and Control of Infection in Healthcare, Canberra: National Health and Medical Research Council (NHMRC) (2019). Accessed 26th March, 2020.
- Australian and New Zealand Intensive Care Society (ANZICS), COVID-19 Guidelines Version 2 (2020). Accessed 26th April, 2020. https://www.anzics.com.au/wp-content/uploads/2020/04/ANZI_3367_Guidelines_V2.pdf
- Clinical Excellence Commission (CEC), COVID-19 PPE training videos. Accessed 17th April, 2020. http://www.cec.health.nsw.gov.au/keep-patients-safe/COVID-19/Personal-Protective-Equipment-PPE/covid-19-training-videos
- CEC) Standard and Transmission Based Precautions (including PPE): Contact and Droplet Precaution Sign.2020; Contact, Droplet, Airborne Precaution Sign.2020, http://www.cec.health.nsw.gov.au/keep-patients-safe/infection-prevention-and-control/Coronavirus-COVID-19

3. What is the correct doffing procedure for aerosol PPE?

ST VINCENT'S HEALTH NETWORK SYDNEY

Resource updated: 27th April, 2020

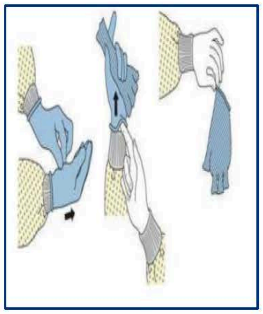
Sequence for removing (doffing) of PPE in ICU for COVID-19 suspected/confirmed cases

To ensure safe removal of PPE, having a "PPE buddy" is recommended during the doffing procedure

Inside Room

1 Gloves

- Outside of gloves is contaminated!
- Grasp outside of glove with opposite gloved hand; peel off
- Hold removed glove in gloved hand.
- Slide fingers of un-gloved hand under remaining glove at wrist
- Peel glove off over first glove
- Discard gloves in waste container

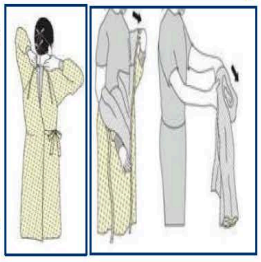


2 Hand Hygiene

Wash hands or use an alcohol based hand rub

3 Gown

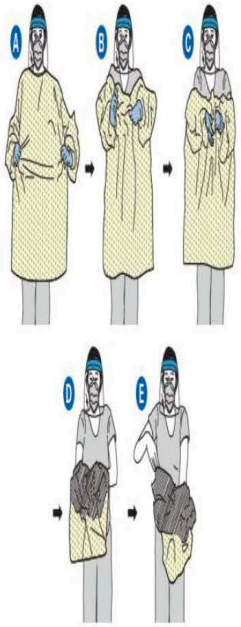
- Gown front and sleeves are contaminated!
- Unfasten ties
- Pull away from neck and shoulders, touching inside of gown only
- Turn gown inside out
- Fold or roll into a bundle and discard



OR

Gown and Gloves

- Grasp the gown in the front and pull away from your body so that the ties break, touching outside of gown only with gloved hands
- While removing the gown, fold or roll the gown inside-out into a bundle
- As you are removing the gown, peel off your gloves at the same time, only touching the inside of the gloves and gown with your bare hands
- Discard gown and gloves



4 Hand Hygiene

Wash hands or use an alcohol based hand rub

Leave Room

5 Hand Hygiene

Wash hands or use an alcohol based hand rub

6 Face Shield or Protective Goggles

- **Remove Face Shield/Eyewear and Hair Cover** away from the face
- Outside of eyewear or face shield is contaminated!
- Place in designated receptacle for reprocessing or in waste container

7 Hand Hygiene

Wash hands or use an alcohol based hand rub

8 Mask

- Front of mask is contaminated – DO NOT TOUCH!
- Grasp bottom, then top ties or elastics and remove
- Discard in waste container

9 Hand Hygiene

Wash hands or use an alcohol based hand rub

References:

- Australian Guidelines for the Prevention and Control of Infection in Healthcare, Canberra: National Health and Medical Research Council [NHMRC] (2019). Accessed 26th March, 2020.
- Centres for Disease Control and Prevention [CDC], How to safely remove personal protective equipment (PPE): CS250672-E , page 3 [n.d.]. Accessed 26th April, 2020. https://www.cdc.gov/hai/pdfs/ppe/ppe-sequence.pdf
- Clinical Excellence Commission [CEC], Standard and Transmission Based Precautions (including PPE): Contact and Droplet Precaution Sign 2020; Contact, Droplet, Airborne Precaution Sign 2020. http://www.cec.health.nsw.gov.au/keep-patients-safe/infection-prevention-and-control/Coronavirus-COVID-19

4. **How do you minimise respiratory pathogen transmission during intubation?**

- *Minimal number of staff present during high risk procedures*
- *Airway management by most experienced practitioner available*
- *Avoid use of nebulisers*
- *Humidified, high flow nasal prongs (HFNO) and non-invasive ventilation (NIV) may considered in select cases only in a negative pressure or single room*
- *Preoxygenation using 100% oxygen via a bag valve mask fitted with a hydrophobic filter and using two hand technique before RSI*
- *Hydrophobic filter between face mask and breathing circuit/airway bag*
- *Avoid manipulation of facemask*
- *Avoid manual ventilation of the patient*
- *Endotracheal intubation is preferred over laryngeal mask airway*
- *Avoid oropharyngeal or nasopharyngeal airway adjuncts where possible*
- *Avoid green bag use*
- *Avoid suctioning unless gross airway contamination preventing intubation*
- *Recruitment manoeuvres via ventilator only (using escalating PEEP*
- *In the event of cardiac arrest, compression only CPR until the airway has been secured, chest compressions should not continue during intubation*

5. **Describe and interpret the following ECG.**

Rate	*Atrial rate ~ 100/min* *Ventricular rate ~47/min and not associated with atrial rate*
P waves	*Upright in II and normal morphology*
QRS	*Narrow, normal axis (+60)* *Inferior q waves* *Dominant R wave in V2 and V3*
ST	*Elevation 2-3mm inferiorly III>II* *Depression V1-3* *Depression I and aVL*
T wave	*Upright V1*

➔ *Complete heart block*
Junctional escape rhythm
Inferior STEMI with ST elevation III>II so likely RCA occlusion
Extension posteriorly