Human Resource for Health Protocol during COVID 19 Response

8th May 2020

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Foreword

This interim guidance is intended for healthcare managers and health care workers (HCWs) at both National and County/ Sub-county levels including public and private health facilities for planning purposes. It is based on currently available information about COVID-19 and will be updated as information becomes available.

Health workers are a critical component of the response to COVID 19 and it is important to project and plan for the number and cadre of health workers needed for the response in various areas and levels of the response. In addition, it is critical to plan the work shift, welfare of the workers and risk assessment to mitigate risk of fatigue, burnout and transmission of infections.

Key concepts in this guidance include:

a. The human resource for health needs that health facility managers need to take into consideration as they set up the isolation and critical care centres for COVID 19 patients. The managers or team leads should note the guidance on work shift and teams to minimise burn out, fatigue and transmission of the infection.
b. The rights and responsibilities of health workers and health facility managers are highlighted including the importance of providing the appropriate personal protective equipment for health workers as recommended by World Health Organisation
c. The welfare of health workers is also highlighted including training and capacity building, availability of accommodation, transport and meals. Health workers with co-morbidities and above 50 years among other considerations should be exempted from direct management of COVID 19 patients
d. Health worker surveillance, risk assessment and testing should be undertaken regularly and as guided in the protocol.

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1. Introduction and objectives

This protocol for human resources for health has been developed in response to the new Coronavirus Disease 2019 (COVID-19) caused by the SARS-CoV 2 virus. The main objective of this protocol is to provide guidance on staffing of COVID 19 patients' isolation and treatment centres and also measures that should be adopted to minimize the negative physical and psychosocial consequences on health workers taking care of COVID 19 patients.

2. Rights, roles and responsibilities of health workers and managers, in responding to COVID-19

Health workers are at the front line of any outbreak response and as such are exposed to hazards that put them at risk of infection with an outbreak pathogen (in this case COVID-19). Hazards include pathogen exposure with increased social risk, long working hours, psychological distress, fatigue, occupational burnout, stigma, physical and psychological violence. The following roles and rights of health workers and managers have been adapted from WHO guidelines on the same.

Employers and managers in health facilities should:

- Assume overall responsibility to ensure necessary preventive and protective measures are taken to minimize occupational safety and health risks;
- Provide information updates, instruction and training on occupational safety and health, including;
    - Training on infection prevention and control (IPC); and
    - Use, putting on(donning), taking off (doffing) and disposal of personal protective equipment (PPE)
- Provide adequate IPC and PPE supplies (masks, gloves, goggles, gowns, hand sanitizer, soap and water, cleaning supplies) in sufficient quantity to healthcare or other staff caring for suspected or confirmed COVID-19 patients, such that workers do not incur expenses for occupational safety and health requirements;
- Ensure a safe working environment including but not limited to provision of well ventilated consultation areas, regular fumigation of the consultation areas, patients waiting bays and wards to minimize the risk
- Facilities should also provide workers with medical scrubs for attending to COVID-19 patients. These scrubs should not be carried home but rather laundered in the facility to reduce spread in the community;

- Facilities should arrange accommodation on site or at a designated place for staff involved in handling COVID-19 patients to avoid community spread
- Familiarize personnel with technical updates on COVID-19 and provide appropriate tools to assess, triage, test and treat patients and to share infection prevention and control information with patients and the public
- As needed, provide with appropriate security measures for personal safety;
- Encourage workers to report on incidents, such as exposures to blood or bodily fluids from the respiratory system or to cases of violence, and to adopt measures for immediate follow- up, including support to victims
- Advise workers on self-assessment, symptom reporting and allow staying home when ill;
- Not require a sick note from workers who are sick with respiratory symptoms before returning to work;
- Establish a surveillance system among healthcare workers with respiratory symptom
- Maintain appropriate working hours with breaks;
- Plan for increased absenteeism if workers are ill and plan for this accordingly by e.g. cross-training current employees or hiring additional temporary staff;
- Consult with health workers on occupational safety and health aspects of their work and notify the labour inspectorate of cases of occupational diseases;
- Honour the right to compensation, rehabilitation and curative services if infected with COVID-19 following exposure in the workplace. This would be considered occupational exposure and resulting illness would be considered an occupational disease
- Provide access to mental health and counselling resources; and
- Enable co-operation between management and workers and/or their representatives

Health workers should:

- Follow established occupational safety and health procedures, avoid exposing others to health and safety risks
- Participate in employer-provided occupational safety and health training;
- Use provided protocols to assess, triage and treat patients;
- Treat patients with respect, compassion and dignity;
- Maintain patient confidentiality;

- Swiftly follow established public health reporting procedures of suspect and confirmed cases
- Provide or reinforce accurate infection prevention and control and public health information, including to concerned people who have neither symptoms nor risk;
- Put on, use, take off and dispose of personal protective equipment properly;
- Self-monitor for signs of illness and self-isolate or report illness to managers, if it occurs;
- Present for COVID-19 laboratory testing and re-testing at scheduled intervals as part of occupational safety and health procedures
- Advise on management if they are experiencing signs of undue stress or mental health challenges that require support interventions;
- Report to their immediate supervisor any situation, which they have reasonable justification to believe, presents an imminent and serious danger to life or health.
- Not be required to return to a work situation where there is continuing or serious danger to life or health, until the employer has taken any necessary remedial action;

3. Human Resource for Health needs in isolation ward and critical care units

a. *Health workers and support staff needed to work in Isolation Ward for COVID 19 patients*

Health workers needed to work in isolation ward include

- Physician/Paediatrician to be on call and available for consultation in person or online every day or when needed

- Pathologists – should be available for phone consultation to provide guidance on handling the COVID-19 human remains
- Radiologist on call
- Medical Officer -Team leader where there is no physician
- Pharmacist
- Pharmaceutical technicians
- Clinical Officers
- Nurses
- Chest physiotherapists
- Infection Prevention and Quality Assurance Coordinator(Nurse)
- Public Health Officer
- Epidemiologists
- Nutritionists
- Clinical Psychologist or Psychological counsellors
- Medical Lab technologists
- Support staff (Kitchen staff, cleaners, porters, Laundry staff)
- Ambulance drivers
- Radiographers (on call)
- Mortician
- Health records officers
- Medical engineers (on call)
- Staff to undertake fumigation and waste management

Ratio of the core health workers to patient in the general isolation ward

Cadre/Area of specialization	Staff to patient Ratio	Shift duration
Physician/Paediatrician		-
Medical Officer	1:10	Two 6 hours day shift , and 12 hour night shift 0r 8 hourly shifts
Clinical Officer	1:10	Two 6 hours day shift , and 12 hour night shift 0r 8 hourly shifts
Nurse	1:5	Two 6 hours day shift , and 12 hour night shift 0r 8 hourly shifts
Chest physiotherapist	1:10	Two 6 hours day shift , and 12 hour night shift 0r 8 hourly shifts
Counselling psychologist	1:10	12 hourly shift
Cleaner	1:10	12 hourly shift
Laundry staff	1:10	12 hourly shift
Porter		2 per isolation centre
Epidemiologist		2 per isolation centre
Nutritionist		2 per isolation centre
IPC and QA Coordinator (nurse)		1 per 8 hour shift
Public health officer		2 per isolation centre
Pharmacist	1:50	12 hour shift
Medical lab technologist	1:20	Two 6 hours day shift , and 12 hour night shift 0r 8 hourly shifts
Mortician		4 per site

Note: Tele-Consultation and review of patients by the physicians and or paediatrician every day or as planned by the team lead. Radiologists can review and report images remotely

b. *Health workers and support staff needed in Critical Care Units dedicated to COVID 19*

The health workers needed in critical care units in ICU include;

- Anaesthesiologist/ Emergency Physician/ Family Physician with emergency care training
- Physician- Team leader
- ENT Surgeon-On call
- Medical Officers
- Clinical Officer anaesthetist
- Critical care nurse
- Clinical Pharmacists
- Chest Physiotherapist
- Clinical Nutritionist
- Cleaner
- Porters
- Laundry staff
- Medical Laboratory technologists

Health worker patient ratios to be maintained in critical care units

Cadre/Area of specialization	**Staff to patient ratio**	**Shift duration**
Anaesthesiologist/ Emergency physician/ Family physician	1:6	Two 6 hours day shift , and 12 hour night shift 0r 8 hourly shift
Physician	1:6	Two 6 hours day shift , and 12 hour night shift 0r 8 hourly shift
ENT Surgeon		1 per site ,On call
Medical Officer	1:6	Two 6 hours day shift , and 12 hour night shift 0r 8 hourly shift
Clinical Officer Anaesthetist	1:6	Two 6 hours day shift , and 12 hour night shift 0r 8 hourly shift
Critical care nurse	1:1	Two 6 hours day shift , and 12 hour night shift 0r 8 hourly shift
Chest Physiotherapist	1:6	Two 6 hours day shift , and 12 hour night shift 0r 8 hourly shift

Clinical Pharmacist	1:50	12 hour shift
Clinical nutritionist	1:10	Two 6 hours day shift , and 12 hour night shift 0r 8 hourly shift
Cleaner	1:10	Three 8 hour shifts
Laundry staff	1: 10	Three 12 hour shifts
Porter		Three 2 per ICU
Medical lab technologists	1:20	Three 8 hour shifts

4. Consideration for exemption of health workers from COVID 19 direct patient management duties

The following categories of health workers should be exempted from COVID 19 direct patient management duties

- Health workers with comorbidities such as diabetes mellitus, hypertension chronic respiratory illness, cardiac illness, HIV/ AIDS, cancer and any immunosuppressive illness
- Pregnant health workers
- Breastfeeding mothers with children under 1 year of age
- Staff beyond 50 years of age
- Consideration for couples who are both health workers

The above categories of health workers should be moved to work with Non COVID patients or on duties that do not put them at risk of contracting the infection.

5. Training required by Health workers

Initial training should contain the following:

1. Case management protocol for COVID 19
2. Infection Prevention and control
3. Use of PPEs and its rationalization
4. Community engagement

5. Health worker risk assessment and surveillance
6. Mental health and psychosocial support training

Additionally, the health facility should continue building the capacity of their staff by identifying the needed skills and make arrangements for training both online and offline. All protocols should be at the disposal of the health workers to refer to when needed.

6. Welfare for health workers during the response to COVID 19 pandemic

The health facility managers, national and county health departments should ensure that the health workers have access to the following:

a) Psycho social support: Psychosocial support for health workers are integral part of the response and should be provided through the following ways;

   i) The health facility managers or in-charges of the isolation centres should plan for daily debrief sessions for the health workers at the end of the shift or any other time with a clinical psychologist.
   ii) health worker can use remote methods of accessing psychosocial support by calling
      - national toll free line (1503)
      - Call the health worker dedicated line
      - Call the 1199 line being used by general public

b) Accommodation: All health facilities (including those within counties) should designate an accommodation area for health workers for the duration of work in the COVID-19 isolation and quarantine facilities. These accommodation facilities should have self-contained bathrooms and toilets. Recommendation of the accommodation include hotels near the hospitals among others

c) Each county should establish an isolation and treatment area/ward for the staff.
d) Meals should be provided by the health facilities (and counties) in packages which are easily disposable with meals presented and eaten in individual rooms instead of communal dining as part of physical distancing strategy.
e) Transport: Buses from high schools and government agencies to be pooled together and used for transporting health workers. Infection prevention measures (including physical distancing during transportation, wearing of medical masks and provision of hand sanitizers within the

buses) should be adhered to during this period and ensure the buses and vehicles are not sources of infection to health workers and others

f) Holding rooms / call rooms to be used by health workers while on shift. In between the shifts, the room should be cleaned and disinfected to avoid transmission of the virus.
g) General reading material, internet access and access to social media for entertainment to aid in countering the social isolation and work-related stress

7. Work Shifts and duration to be adopted during COVID 19 response

Option A: 2 Six hour shift for the day and 12 hour night shift

Option B: 3 Eight hour shifts

The 24 hour team is composed of the three shifts (two day shifts and one night shift). The teams during the shifts should be maintained and should not be mixed to avoid any cross contamination in case any exposure occurs.

The recommendation is for the team to work for two weeks continuously and then off for two weeks. During the two weeks off;

a) Week one will be quarantine week and then proceed home to be with the families for another week. This will apply if health workers accommodated at the place of work.

c) Or proceed home for 14 off-days before resuming work. This will apply for health workers who are living alone and commuting to work daily from home.

For both scenarios above, there is need to have two active teams and one on standby team. Team A will be working, team B will be on quarantine and off and team C on standby for replacement.

During task allocation, the team lead should designate the team member to directly interact with the patient (s), one designated to undertake documentation, another designated to be in-charge of supplies etc. to minimise infection transmission.

8. Risk assessment, surveillance and testing of health workers

Continuous self-assessment should continue through daily monitoring of symptoms including fever, respiratory symptoms, anosmia, gastrointestinal

symptoms etc. and daily temperature check. The health workers should report any symptoms to the IPC nurse, proceed to quarantine and plan for testing. All the health workers in the team should also be assessed, quarantined and tested.

The Nurse in-charge of Infection Prevention should administer the health workers risk assessment and surveillance for COVID form every seven days for health workers and testing undertaken as recommended based on the risk.

For scenario **a)** above where health workers do not go home to their families for two weeks (HCWS accommodated at work), testing should be done when health workers finish their one week of quarantine before they go home to their families and when they complete their homestay and come back to work. This will ensure that they are not going to transmit the virus to the families or from community to other health workers.

For scenario **b)** above where health workers (commute to work daily), they should be tested a day before they start their 14 day off-days and a day before they resume work.

Health workers should continue to practice social distancing, hand hygiene and use of medical masks with each other to make sure that infections are not spread among the health workers themselves

9. Management of health workers exposed to COVID-19 virus

The management of health workers exposed to COVID-19 virus will vary according to the risk categorization.

Recommendations for health workers with high risk for infection:

- Stop all health care interaction with patients for a period of 14 days after the last day of exposure to a confirmed COVID-19 patient;
- Quarantine for 14 days in a designated setting
- Be tested for COVID-19 virus infection 1 week after the high risk exposure (On day 7);

Health care facilities should:

- Provide psychosocial support to HCW during quarantine, or duration of illness if HCW becomes a confirmed COVID-19 case;
- Provide compensation for the period of quarantine and for the duration

of illness (if not on a monthly salary) or contract extension for duration of quarantine/illness;
- Refresher IPC training for the health care facility staff, including HCWs at high risk for infection once he/she returns to work at the end of the 14-day period;
- Provide the hand hygiene and waste disposal facilities at accessible and convenient points;

Recommendations for health workers with low risk for COVID-19 infection:
- Self-monitor temperature and respiratory symptoms daily for 14 days after the last day of exposure to a COVID-19 patient. HCWs should be advised to call health care facility if he/she develop any symptoms suggestive of COVID-19;
- Reinforce contact and droplet precautions when caring for all patients with acute respiratory illnesses and standard precautions to take care of all patients;
- Reinforce airborne precautions for aerosol generating procedures on all suspect and confirmed COVID-19 patients including use of N-95 masks or equivalent;
- Reinforce the rational, correct and consistent use of PPE when exposed to confirmed COVID- 19 patients;
- Apply WHO's "My 5 Moments for Hand Hygiene" before touching a patient, before any clean or aseptic procedure, after exposure to body fluid, after touching a patient, and after touching patient's surroundings;
- Practice respiratory etiquette at all times;
- Reinforce all measures of the standard precautions;

10. Management of health workers who test positive for COVID-19

Health Care Workers may become infected with COVID-19 in the line of duty or may get infected in the community. Counties and hospitals should designate space within their isolation facilities or other identified facilities where health care workers who develop COVID-19 will be cared for during their illness.

Appendices

Appendix A: Tool for Risk assessment and surveillance of HCWs in the context of COVID-19

Current evidence suggests that the virus that causes COVID-19 is transmitted

between people through close contact and droplets. People most at risk of acquiring the disease are those who are in contact with or care for patients with COVID-19. This inevitably places HCWs at high risk of infection. Protecting HCWs is of paramount importance to the Government of Kenya. Understanding how HCW exposure to COVID 19 virus translates into risk of infection is critical for informing IPC recommendations. This data collection form and risk assessment tool can be used to identify IPC breaches and define policies that will reduce HCW exposure and nosocomial infection. This tool is to be used for health care facilities with COVID 19 patients. The form should be completed for all HCWs who have been exposed to a patient with confirmed COVID-19. This tool aids in the risk assessment for HCWs after exposure and provides recommendations for their management as spelt out in part 8 above

Assessment objectives:

1. To determine the risk categorization of each HCW after exposure to a COVID-19 patient (see below Part 1: COVID-19 virus exposure risk assessment form for HCWs);
2. To inform the management of the exposed HCWs based on risk (see below Part 2: Management of health worker exposed to COVID-19 virus). See part 8 page 12 -13 above

Part 1: COVID-19 virus exposure risk assessment form for HCWs

1. Interviewer information	
A. Interviewer name:	
B. Interviewer date (DD/MM/YYYY):	___/___/_____
C. Interviewer phone number:	
D. Does the health worker have a history of staying in the same household or classroom environment with a confirmed COVID-19 patient?	□ Yes □ No
E. Does the HCW have history of traveling together in close proximity (within 1 meter) with a confirmed COVID-19 patient in any kind of conveyance?	□ Yes □ No

Yes, to questions 1 D – 1E is considered community exposure to COVID-19. HCWs should be managed as such. The management recommendations in Part 2: Management of health workers exposed to COVID-19 virus apply only to exposure in health care settings.

2. Health worker information	
A. Last name:	
B. First name:	
C. Age	
D. Sex:	□ Male □ Female □ Prefer not to answer
E. City:	
F. Country:	
G. Contact details:	
H. Type of health care personnel:	□ Medical doctor □ Physician assistant □ Registered nurse (or equivalent) □ Enrolled Nurse (or equivalent) □ Radiology /x-ray technician □ Phlebotomist □ Ophthalmologist □ Physical therapist □ Respiratory

	therapist □ Nutritionist/dietician □ Midwife

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	□ Pharmacist □ Pharmaceutical technologist
	□ Laboratory personnel □ Admission/reception clerk □ Patient transporter □ Catering staff □ Cleaner □ Other (specify):
I. Health care facility unit type in which the health worker works?	Tick all that apply: □ Outpatient □ Emergency □ Medical unit □ Intensive care unit □ Cleaning services □ Laboratory □ Pharmacy □ Other, specify:
3. Health worker interactions with COVID-19 patient information	
A. Date of health worker first exposure to confirmed COVID-19 patient:	Date (DD/MM/YYYY): ___/___/_____ □ Not known
B. Name of health care facility where case received care:	
C. Type of health care setting:	□ Hospital □ Outpatient clinic □ Primary health centre □ Home care for mild cases □ Other:
D. City:	
E. Country:	
F. Multiple COVID-19 patients in health care facility	□ Yes □ No □ Unknown Number of patients (approximate if exact number not known):
4. Health worker activities performed on COVID-19 patient	
A. Did you provide direct care to a confirmed	□ Yes □ No □ Unknown

COVID- 19 patient?	
B. Did you have face-to-face contact (within 1 meter) with a confirmed COVID-19 patient in a health care facility?	□ Yes □ No □ Unknown
C. Were you present when any aerosol generating procedures	□ Yes □ No □ Unknown

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was performed on the patient? See below for examples	
- If yes, what type of procedure?	□ Tracheal intubation □ Nebulizer treatment □ Open airway suctioning □ Collection of sputum □ Tracheostomy □ Bronchoscopy □ Cardiopulmonary resuscitation (CPR) □ Other, specify:
D. Did you have direct contact with the environment where the confirmed COVID-19 patient was cared for? E.g. bed, linen, medical equipment, bathroom etc.	□ Yes □ No □ Unknown
E. Were you involved with health care interaction(s) (paid or unpaid) in another health care facility during the period above?	□ Other health care facility (public or private) □ Ambulance □ Home care □ No other health care facility

If the health worker responds 'Yes' to any of the Questions 4A – 4D the health worker should be considered as being exposed to COVID-19 virus.

5. Adherence to infection prevention and control (IPC) during health care interactions	
For the following questions, please quantify the frequency you wore PPE, as recommended: 'Always, as recommended' should be considered wearing the PPE when indicated more than 95% of the time; 'Most of the time' should be considered 50% or more but not 100%; 'occasionally' should be considered 20% to under 50% and 'Rarely' should be considered less than 20%.	
A. During the period of a health care interaction with a COVID- 19 patient, did you wear personal protective equipment (PPE)?	□ Yes □ No
- If yes, for each item of PPE below, indicate how often you used it:	
- 1. Single gloves	□ Always, as recommended □ Most of the time (50% or more but not 100%) □ Occasionally 20% to under 50%) □ Rarely (less than 20% of the time)
- 2. Medical mask	□ Always, as recommended □ Most of the time □ Occasionally □ Rarely
- 3. Face shield or goggles/protective glasses	□ Always, as recommended □ Most of the time □ Occasionally □ Rarely
- 4. Disposable gown	□ Always, as recommended □ Most of the time □ Occasionally □ Rarely
B. During the period of health care interaction with the COVID- 19 patient, did you remove and replace your PPE according to protocol (e.g. when medical mask became wet, disposed the wet PPE	□ Always, as recommended □ Most of the time □ Occasionally □ Rarely

in the waste bin, performed hand hygiene, etc.)?	
C. During the period of health care interaction with the COVID- 19 case, did you perform hand hygiene before and after touching the COVID-19 patient? NB: Irrespective of wearing gloves	□ Always, as recommended □ Most of the time □ Occasionally □ Rarely
D. During the period of health care interaction with the COVID- 19 case, did you perform hand hygiene before and after any clean or aseptic procedure was performed (e.g. inserting: peripheral vascular catheter, urinary catheter, intubation, etc.)?	□ Always, as recommended □ Most of the time □ Occasionally □ Rarely
E. During the period of health care interaction with the COVID- 19 case, did you perform hand hygiene after exposure to body fluid?	□ Always, as recommended □ Most of the time □ Occasionally □ Rarely
F. During the period of health care interaction with the COVID- 19 case, did you perform hand hygiene after touching the COVID-19 patient's surroundings (bed, door handle, etc.)? Note: this is irrespective of wearing gloves	□ Always, as recommended □ Most of the time □ Occasionally □ Rarely
G. During the period of health care interaction with the COVID- 19 case, were high touch surfaces decontaminated frequently (at least three times daily)?	□ Always, as recommended □ Most of the time □ Occasionally □ Rarely
6. Adherence to infection prevention and control (IPC) when performing aerosol generating	
procedures (e.g. Tracheal intubation, nebulizer treatment, open airway suctioning, collection of sputum, tracheostomy, bronchoscopy, cardiopulmonary resuscitation (CPR) etc.)	
For the following questions, please quantify the frequency you wore PPE, as recommended: 'Always, as recommended' should be considered wearing the PPE when indicated more than 95% of the time; 'Most of the time' should be considered 50% or more but not 100%; 'occasionally' should be considered 20% to under 50% and 'Rarely' should be considered less than 20%.	

A. During aerosol generating procedures on a COVID-19 patient, did you wear personal protective equipment (PPE)?	□ Yes □ No
- If yes, for each item of PPE below, indicate how often you used it:	
- 1. Single gloves	□ Always, as recommended □ Most of the time

	□ Occasionally □ Rarely
- 2. N95 mask (or equivalent respirator)	□ Always, as recommended □ Most of the time □ Occasionally □ Rarely
- 3. Face shield or goggles/protective glasses	□ Always, as recommended □ Most of the time □ Occasionally □ Rarely
- 4. Disposable gown	□ Always, as recommended □ Most of the time □ Occasionally □ Rarely
- 5. Waterproof apron	□ Always, as recommended □ Most of the time □ Occasionally □ Rarely
B. During aerosol generating procedures on the COVID-19 patient, did you remove and replace your PPE according to protocol (e.g. when medical mask became wet, disposed the wet PPE in the waste bin, performed hand hygiene, etc.)?	□ Always, as recommended □ Most of the time □ Occasionally □ Rarely
C. During aerosol generating procedures on the COVID-19 case, did you perform hand hygiene before and after touching the COVID-19 patient? NB: Irrespective of	□ Always, as recommended □ Most of the time □ Occasionally □ Rarely

wearing gloves	
D. During aerosol generating procedures on the COVID-19 case, did you perform hand hygiene before and after any clean or aseptic procedure was performed (e.g. inserting: peripheral vascular catheter, urinary catheter, intubation, etc.)?	□ Always, as recommended □ Most of the time □ Occasionally □ Rarely
E. During aerosol generating procedures on the COVID-19 case, did you perform hand hygiene after touching the COVID-19 patient's surroundings (bed, door handle, etc.)? Note: This is irrespective of wearing gloves	□ Always, as recommended □ Most of the time □ Occasionally □ Rarely
F. During aerosol generating procedures on the COVID-19 case, were high touch surfaces decontaminated frequently (at least three times daily)?	□ Always, as recommended □ Most of the time □ Occasionally □ Rarely
7. Accidents with biological material	
A. During the period of a health care interaction with a COVID-19 infected patient, did you have any episode of accident with biological fluid/respiratory secretions? See below for examples	□ Yes □ No
- If yes, which type of accident?	□ Splash of biological fluid/respiratory secretions in the mucous membrane of eyes □ Splash of biological fluid/respiratory secretions in the mucous membrane of mouth/nose

Risk categorization of health workers exposed to COVID-19 virus

1. High risk for COVID-19 virus infection The HCW did not respond 'Always, as recommended' to Questions 5A1–5G,6A–6F Or responded 'Yes' to 7A

2. Low risk for COVID-19 virus infection: All other answers

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