Guideline on the deployment of Health Care Workers ≥60 years of age and those with high-risk medical comorbidities during the COVID-19 epidemic

Definitions

- Health Care Worker (HCW) – a person engaged in actions whose primary intent is to enhance health.
- Frontline HCW – a HCW who interacts directly with patients either in hospitals, clinics or the community. This may include amongst others - doctors, nurses, pharmacists, dietitians, physiotherapists, speech and occupational therapists, emergency care practitioners, technologists and radiographers, community health workers (CHW), porters, and administrators working on the wards directly with patients.

Question

Given the high mortality of older health care workers and those with high-risk comorbidities, how should such high-risk HCWs be deployed in the South African Health Care System to work safely, and productively?

Evidence

Age, gender, and the presence of certain co-morbidities have been identified as risk factors for mortality from COVID-19.[1-4] In Italy for example, % mortality in 22,512 patients (1625 deaths), was intimately linked to increasing age, (Table 1). In addition, age and male gender have been identified as risk factors for mortality in health care workers (HCWs) globally.[5-7].

Table 1: Case fatality rates in Italy related to age[4]

Age, y	Deaths, No. (% of total)	Case-fatality rate, %
0-9	0	0
10-19	0	0
20-29	0	0
30-39	4 (0.25)	0.3
40-49	10 (0.62)	0.4
50-59	43 (2.65)	1.0
60-69	139 (8.55)	3.5
70-79	578 (35.57)	12.5
80-89	694 (42.71)	19.7
≥90	156 (9.6)	22.7
Not reported	1 (0.06)	0.6
Total	**1625 (100)**	**7.2**

High-risk comorbidities related to increase risk from COVID-19 are defined in Table 1 by the following groups:

Table 1: Risk Factors for Severe COVID-19[8-10]

Risk Factor	Detail	Definition
Age	People 60 years and older with comorbidities	Aged 60 years or older with one or more disorders or conditions.
People of all ages with the following underlying medical conditions, particularly if not well controlled:		
Cardiovascular Disease	Moderate/ Severe Hypertension	Moderate hypertension: systolic BP 160-179mmHg and/or diastolic BP 100-109 mmHg. Severe hypertension: systolic BP ≥180 mmHg and/or diastolic BP ≥110 mmHg.
	Congestive cardiac failure or other serious cardiovascular disease	Confirmed clinical diagnosis of congestive cardiac failure or other serious cardiovascular disease
	Cerebrovascular disease, including stroke and transient ischaemic attack	Confirmed clinical diagnosis of cerebrovascular disease.
Respiratory Disease	Pulmonary Tuberculosis – untreated or in early treatment	People who have not completed the intensive phase or first two months of treatment in line with the National Department of Health Standard Treatment Guidelines.
	Moderate to severe asthma	Asthma which requires treatment with high dose inhaled corticosteroids plus a second controller (and/or systemic corticosteroids) to prevent it from becoming 'uncontrolled' or which remains 'uncontrolled' despite this therapy.
	Chronic Obstructive Pulmonary Disease (COPD)	Confirmed clinical diagnosis of COPD
	Other severe chronic lung pathology, including cystic fibrosis and bronchiectasis	Confirmed clinical diagnosis – irrespective of severity.
Kidney Disease	Chronic Kidney Disease	eGFR < 45
Pregnancy	Third trimester pregnancy	Estimated to be further than week 27 of pregnancy
Immunosuppression	Poorly controlled type II Diabetes Mellitus	HBA1c ≥7.5% within last 6 months
	Cancer undergoing active treatment	Currently undergoing chemotherapy and/or radiotherapy

	Human Immunodeficiency Virus with advanced immunosuppression	HIV positive persons with CD4 count <200 cells/mm^3 who are ART-naïve or who initiated ART within last 3 months
	Chronic immunosuppressant use	Chronic use of corticosteroids of >20mg prednisone per day or equivalent, methotrexate, biologicals or other immunosuppressants.
	Transplant	On chronic immunosuppressants
Metabolic syndrome	Severe obesity	Body mass index (MBI) of 40 and higher

More high-risk comorbidities may be defined as global and local experience increases, although to date, the types of comorbidities identified have been fairly consistent in different countries. The exception may be how we define high-risk in terms of persons living with HIV in South Africa. The only case series published to date has been from Barcelona, describes 5 patients co-infected with HIV and SARS-CoV-2, four of whom were on antiretroviral therapy. Four of the five patients had recovered and the 5th was still in intensive care at the time of submission of the paper.[11] This cohort are not representative of our HIV-positive population. Whether persons living with HIV who have advanced immunosuppression constitute a high-risk group for severe COVID-19 remains to be elucidated, but taking the precautionary principle, they will be identified as such for the purposes of this guideline.

South Africa's COVID-19 epidemic is set to surge in the coming months. Current HCW capacity may need to be augmented during that time, by inviting retired HCWs back into the health service. Furthermore, there are many HCWs ≥60 years of age and those with high-risk comorbidities, who are currently employed.

Guidance available from other countries is presented in the accompanying appendix. Most countries recommend that HCWs ≥60 years do not undertake face-to-face clinical work but acknowledge that in times of extreme stress on the health service – such as happened in Italy - exceptions may have to be made, and older HCWs invited to undertake COVID-related clinical work, as frontline HCWs.

Recommendation

At this point in the epidemic, whilst there are uncertainties surrounding the magnitude or risk that age and comorbidities play, it is strongly recommended that South African health care workers ≥60 years of age, including those in retirement who return to the health care workforce in response to COVID-19, or those persons with high-risk comorbidities abide by the following guidelines (Figure 1):

- HCWs ≥60 years with no medical comorbidities may work as frontline clinical HCWs in non-COVID-19 identified areas of hospitals, clinics or the community, where HR needs are critical, only when all possible precautions have been instigated – physical

distancing, meticulous hand hygiene, use of a medical mask and risk-assessed PPE at all times, and regular decontamination of surfaces.

- No HCW ≥60 years of age (with or without high risk co-morbidity), or HCWs ≤60 years with one or more high-risk comorbidity should undertake medical, nursing, or allied health management of patients who are confirmed or suspect cases of COVID-19.
- HCW ≥60 years of age (with or without high risk co-morbidity), or HCWs ≤60 years with high-risk comorbidity should avoid clinical work in non-COVID-19 identified areas of the hospital where high-risk aerosol-generating procedures are being undertaken e.g. ENT or thoracic surgery, intubation for anesthesia, ICUs, Emergency Units etc.
- HCW ≥70 years of age should not undertake any face-to-face work at the clinical interface within the South African health service
- Non-COVID-19 related activities that should be prioritized for HCWS ≥60y or those with high risk comorbidity include
    - Remote consultations and outreach through Telehealth/Telemedicine
    - Senior academics and clinicians to provide advisory roles to health care institutions, provincial and national government, and administrative support to free up others to undertake clinical duties
    - Provision of support to university teaching platforms for medical, nursing and allied health students
    - Any non-clinical task that does not involve patient contact, including work with provincial contact tracing teams,

We acknowledge that some HCWs with high-risk comorbidities may wish not to disclose their illness to work colleagues due to stigma or any other reason, and hence may not feel able to act on this advisory. To aid this, line managers and local facility teams should be sensitive to confidentiality and open to discussion of options in a safe environment for the HCW. The imperative of providing accurate information, ensuring the continued ability of our colleagues to care for patients as a healthcare asset, and providing choice is of paramount importance.

It is advised that all HCWs with chronic illness consult with their primary care provider in order to optimize treatment and control of said illness. Thorough adherence to all infection prevention guidelines in the workplace, including use of PPE, is strongly recommended.

This guideline will be regularly reviewed during the evolution of the COVID-19 epidemic in South Africa.

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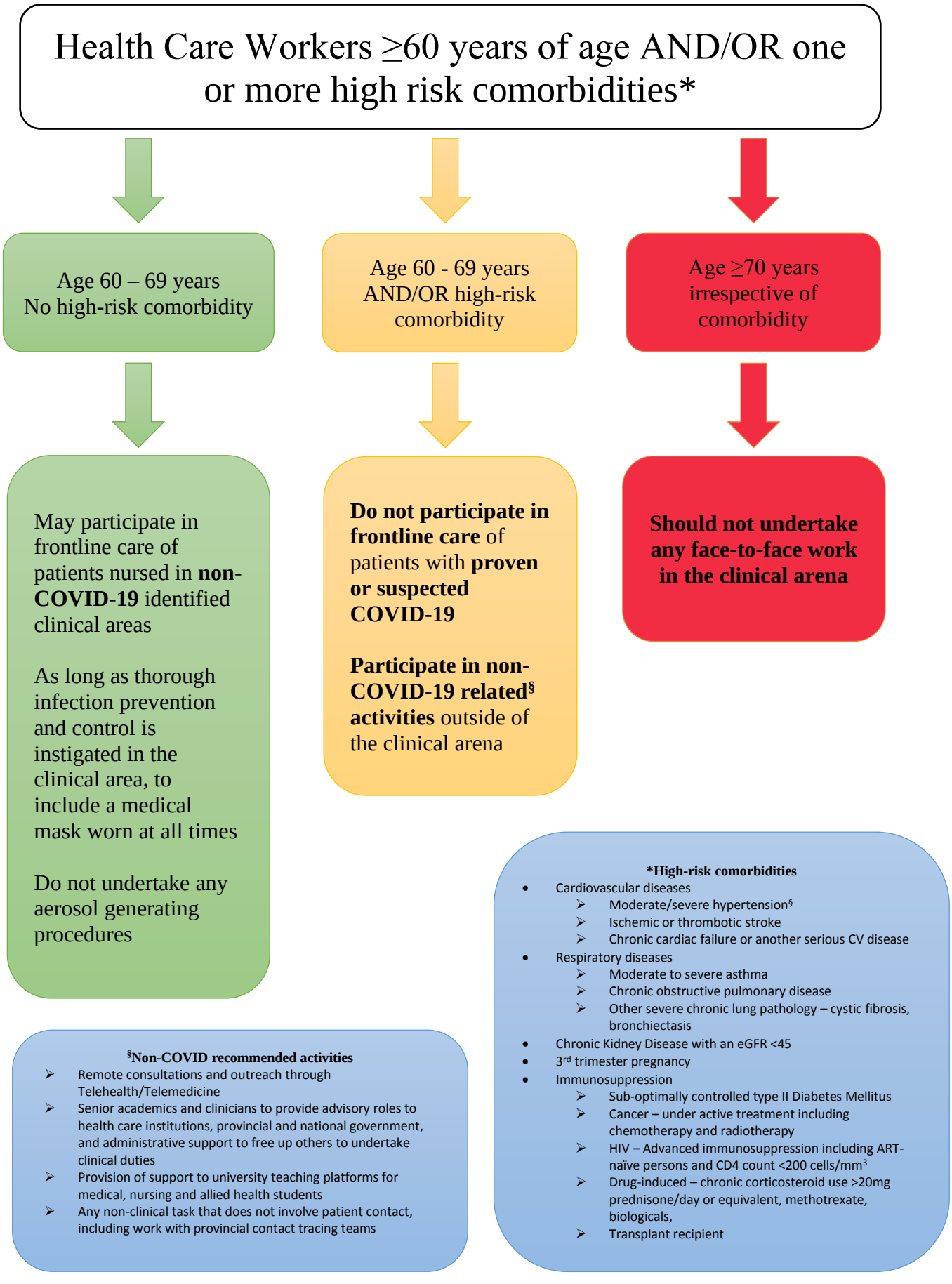
Figure 1 – Recommendations for deployment of HCWs at high risk of severe COVID-19



Appendix – International Guidelines relating to HCWs ≥60y and/or comorbidities

Organization/Country	Guidance
American Medical Association[12]	General recommendation to provide assistance that does not involve direct patient care Many health systems are assigning senior physicians to telehealth and administrative activities, which may free up others to be on the front line. Medical schools are using senior physicians for online teaching and mentoring of medical students. Provide online outreach to residents of nursing homes or senior residential communities to combat isolation
WHO European Region[13] (6 April 2020)	Asking recently retired health care workers to come out of retirement on a voluntary basis to support the response as needed in low-risk roles is an additional consideration.
British Medical Association[14]	Training authorities and employing organisations will determine the range of work you can do based on your skills and experience. For example, an NHS employing organisation will make sure anyone asked to supervise others is adequately trained and competent to do so. Your training requirements will be assessed based on what is being asked of you, your experience and skills, and how long you have been out of practice. The type of work you may be able to undertake will vary and some work will carry more risk, for example you may be needed to work in: • patient-facing roles, including remote consultations • non-patient facing roles such as drug management tasks, lab results etc • triage support in call centres

UK Government[15]	Given the increased risk of COVID-19 in those with co-morbidity and in the elderly population, we would advise retired health care professionals against returning to patient facing clinical work. However, there may be a non-patient facing role that you are interested in exploring. There are multiple possible roles that you might be expected to take on including (but not limited to): , death certification, backfill for clinicians dealing with acute respiratory patients, helping with outpatient clinics (this could be via telephone), seeing Emergency Department patients with acute non-respiratory presentations, providing elective treatment, training other clinicians. People with chronic heart and lung disease have a higher risk of complications and higher mortality than the general population. We would not advise this group to return to directly patient facing roles.
Medical Defense Union[16] (MDU) - UK	If you have pre-existing health conditions putting you at increased risk, the General Medical Council says it may be appropriate to ask another suitably qualified clinician to take over care of patients who have the virus or are suspected of having it.