GUIDANCE ON DIAGNOSIS AND MANAGEMENT OF PEOPLE WITH POST-ACUTE COVID-19 SYNDROME

BACKGROUND

This guidance covers diagnosis and care of patients with long-term effects of COVID-19. It makes recommendations for the care of adults and children who have new or ongoing symptoms 4 weeks or more after the start of acute COVID-19. It is meant for health and care practitioners. This **interim** document has been developed by the Africa Taskforce on Coronavirus Case Management Technical Working Group and will be continuously reviewed and updated in response to emerging evidence.

PATHOPHYSIOLOGY

The potential pathophysiology of post-acute COVID-19 syndrome include: Virus-specific injury; immunologic aberrations and inflammatory damage resulting from the acute infection; and post-critical illness sequelae.

IDENTIFICATION

Post-acute COVID-19 syndrome, long Covid or Covid long-hauler syndrome is defined as the persistence of symptoms for at least four weeks after acute SARS-CoV-2 infection and are not explained by an alternative diagnosis. Many patients, however, experience symptoms for two to six months or longer. Most cases are preceded by symptomatic infection. People with asymptomatic SARS-CoV-2 infection rarely develop post-acute COVID-19 syndrome. Studies from Europe, Asia and USA have reported persistence of symptoms in one-third to two-thirds of patients at 60 days follow-up.

MANIFESTATION (see Figure 1)

Symptoms of post-acute COVID-19 syndrome can be similar to those experienced during acute infection. Fatigue is the most common symptom, followed by myalgia, dyspnea, chest pain and joint pains. Neurologic manifestations, particularly brain fog, numbness and tingling throughout the body have been reported. Patients with long-term hospital stay often develop adverse mental health outcomes including anxiety, depression, post-traumatic stress disorder, and sleep abnormalities. Persistent loss of taste and or smell, and headaches have also been reported. Other manifestations include coronavirus associated nephropathy, cardiac arrythmias, hair loss, new or worsening of existing diabetes mellitus, subacute thyroiditis, and multisystem inflammatory syndrome in children.

As the number of patients recovering from COVID-19 grows, it is important to understand the healthcare issues associated with post-acute COVID-19 syndrome and the required integrated multidisciplinary care through dedicated clinics.

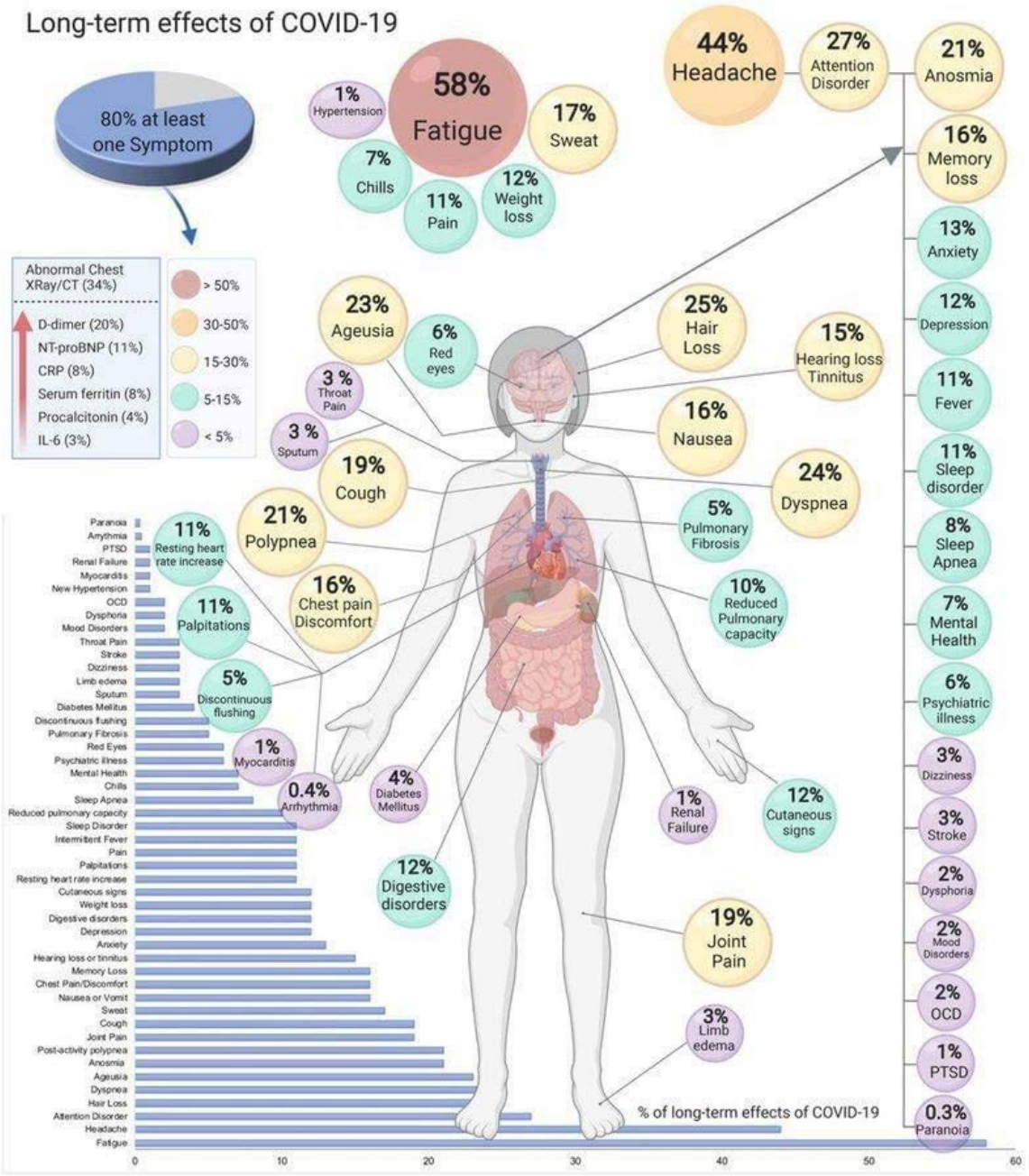

Figure 1: Long-term effects of COVID-19

CARE

The guidance for the management of post-acute COVID-19 syndrome is still evolving. Multidisciplinary national (and local) coordinated care team including primary care providers and specialists such as pulmonologists, cardiologists, dermatologists, clinical psychologists and psychiatrists, as well as physiotherapists, to address specific symptoms should be established.

RECOMMENDATIONS

1) Provide people who have had acute COVID-19 and their caregivers appropriate **advice and information** on the most common new or ongoing symptoms after acute COVID-19.

2) Put in place **multidisciplinary clinic structure** to support COVID-19 survivors for follow-up care.

3) **Clinical assessment** for respiratory, psychiatric, cognitive, thromboembolic sequelae, and rehabilitation needs, is recommended at 4 – 6 weeks after acute COVID-19 using a holistic, person-centred approach.

4) **Standard screening tools** should be used to identify patients with anxiety, depression, sleep disturbances, PTSD, dysautonomia and fatigue.

5) Serial clinical and imaging evaluation with electrocardiogram and echocardiogram at 4 – 12 weeks is prescribed for those with cardiovascular complications during acute infection, or persistent cardiac symptoms.

6) Repeat **clinical assessment** and chest X-ray in all patients at 12 weeks post discharge is recommended.

7) **Based on the 12-week assessment**, patients are further recommended to be evaluated with high-resolution computed tomography of the chest, computed tomography pulmonary angiogram or echocardiogram, or discharged from follow-up.

8) **Home pulse oximetry** using approved devices is recommended as a useful tool for monitoring patients with persistent dyspnoea.

9) **Treatment with corticosteroids** may be beneficial in a subset of patients with post-COVID inflammatory lung disease.

10) **Direct oral anticoagulants or low-molecular-weight heparin** for ≥3 months post discharge is recommended for imaging-confirmed venous thromboembolism.

11) **Physical activity and ambulation** are recommended to all patients as appropriate.

12) Competitive athletes with cardiovascular complications are to **abstain from competitive sports or aerobic activity for 3–6 months** until resolution of myocardial inflammation by either cardiac MRI or troponin normalization.

13) Patients with postural orthostatic tachycardia syndrome and abnormal sinus tachycardia may benefit from a **low-dose beta blocker**.

14) Survivors with persistent impaired renal function will benefit from early and **close follow-up at a nephrology clinic.**

15) Hyperthyroidism due to SARS-CoV-2-related thyroiditis should be **treated with corticosteroids.**

16) Provide advice and information on **self-management**: setting realistic goals; use of pulse oximeter; physical activity and ambulation; who to contact if patients are worried about their symptoms; sources of advice and support; how to get support from other services like social care. Ensure that people have clear instructions and parameters for when to seek further help.

17) Using shared decision making, offer patients the option of **monitoring remotely** depending on availability, preference and whether it is clinically appropriate.

18) Consider **additional support for older people and children**, for example short-term care packages and referral for specialist advice for children respectively.

19) Support people in discussions with their employer or school about **returning to work or education**, for instance by having a phased return.

20) **Refer people with post-acute COVID-19 syndrome urgently** to the relevant acute services if they have signs or symptoms of life-threatening complications like; severe hypoxaemia; severe lung disease; cardiac chest pain; multisystem inflammatory syndrome in children.

21) **Manage all underlying chronic medical conditions as appropriate.**

PROGNOSIS

Many patients with post-acute COVID-19 syndrome will recover slowly and spontaneously with holistic support, rest, symptomatic treatment, and gradual increase in physical activity.