

Home-Management of Mild Cases COVID-19

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If you are suspecting COVID19, have been in contact with a COVID19 confirmed case, or are waiting for COVID19 test results- these handy guidelines will help you in managing at home and preventing the spread of virus to others.

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NOTE

This handbook has been developed by the listed contributors after reviewing the listed documents and guidelines by WHO, CDC, ECDC and other leading public health institutions and experts for home care ([See Annex 15](#)). However, it is important to understand that COVID-19 is a novel disease with rapidly evolving protocols for precautions, quarantine and isolation. For latest research and updates, please refer to WHO's guidance and advice.

The helplines and apps mentioned in this handbook are **specific to Pakistan**.

This is the third version of this handbook, which also incorporates practical tips from COVID19 Survivors, Care Providers and Family Members.

CONTRIBUTORS

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Prof. Nighat Mir Ahmed, Professor of Rheumatology, National Hospital, Adjunct Faculty UHS, FJMU, Gulab Devi Hospital, Member FJOG, Chair ACF

Dr. Shabnum Sarfraz, Member Social Sector, Planning Commission, Government of Pakistan

Dr. Saira Elaine Anwer Khan, Assistant Professor Rheumatology, FMH, ACF

Dr. Naveed Syed, Consultant Communicable Disease Control, Public Health England

Dr. Sumaira Farman Raja, Professor of Rheumatology, National Hospital, FJMU, Gulab Devi Hospital, Adjunct Faculty Cochair ACF

Dr. Ayesha Mian, DFAACAP, SFHEA, Adult, Child and Adolescent Psychiatrist, Associate Professor & Past Chair, Department of Psychiatry, Founding Dean of Students of the Office of Student Experience, Aga Khan University.

Dr. Ahmed Saeed, Associate Professor Rheumatology, Gulab Devi Hospital, Secretary ACF, Adjunct Faculty FJMU

Dr. Samia Latif, Consultant in Communicable Disease Control

Dr. Roomi Aziz, Technical Lead Health Data and Communication, P2impact

Dr. Tanya Soomro, Consultant Paediatrician, Lahore Children's Centre

Dr Aisha Sanober, FCPS, Adult Psychiatrist; Fellow, Child and Adolescent Psychiatry, Aga Khan University.

Dr. Parveen Ali, Senior Lecturer, Sheffield University

Sidra Bashir, Public Health Associate, P2impact

Bilal Majeed, COVID19 Secretariat, Planning Commission

EDITING, REVIEW AND COMPILATION



P2IMPACT
www.p2impact.com

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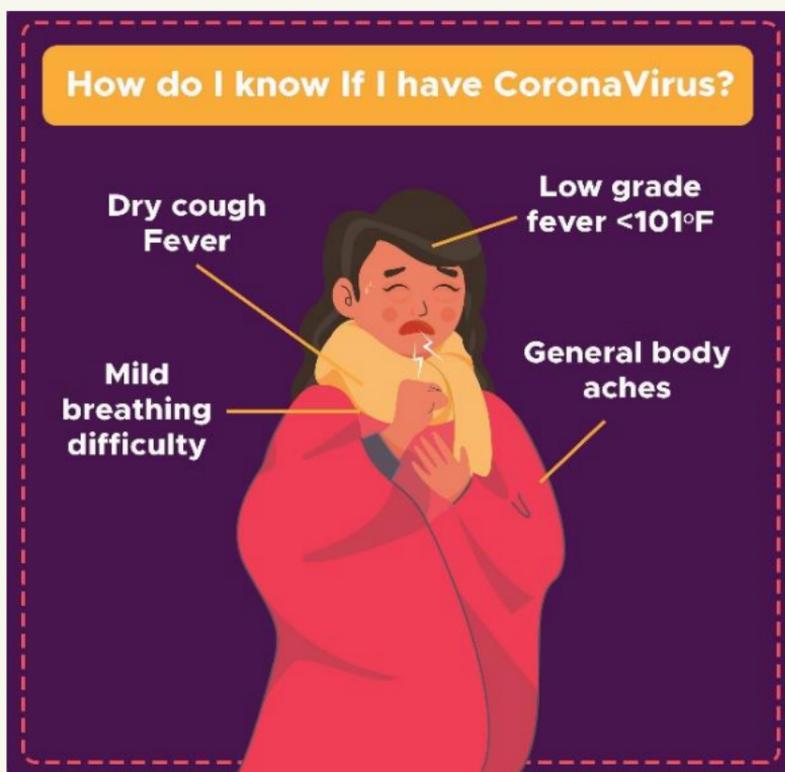
OBJECTIVE OF THE DOCUMENT

This document provides information and guidance for the public (with no health/medical background) on management of stable COVID-19¹ cases (with mild symptoms as elaborated later) at home.

1. INTRODUCTION

1.1. KNOWING COVID-19 SYMPTOMS

The following symptoms may appear within 2-14 days of exposure.



SIGNS AND SYMPTOMS

Most Common	Less Common	Rare
<ul style="list-style-type: none">★ Fever★ Cough (with or without sputum)★ Tiredness/ Fatigue	<ul style="list-style-type: none">★ Body Aches★ Sore throat/ itching in throat★ Muscle pain and Body Aches★ Difficulty in breathing / shortness of breath★ Burning Eyes★ Blocked or Runny Nose★ Loss of smell	<ul style="list-style-type: none">★ Loss of appetite★ Headache★ Nausea★ Vomiting★ Skin rash★ Diarrhoea

EMERGENCY WARNING SIGNS

- ★ Increasing difficulty in breathing (especially if sudden onset)
- ★ Persistent pain/ heaviness in chest
- ★ Worsening ability to concentrate or confusional state
- ★ Bluish lips or face

¹ COVID-19 is a novel Coronaviruses (CoV) strain first surfacing in December 2019, spreading via cough and sneeze droplets.

It is critical that medical help is sought immediately in case of emergency warning signs, as this may rapidly progress into any of the clinical syndromes associated with COVID-19 (pneumonia, severe pneumonia, Acute Respiratory Distress Syndrome (ARDS), sepsis, septic shock). In case of emergency signs, immediately call the **Government of Pakistan COVID-19 Helpline +92 300 111 1166** and/or visit a government designated public or private hospital.

1.2. WHO IS AT RISK?

While everyone is at risk, some are more vulnerable and may become more severely ill, if infected. These include:

- ★ Patients aged 60 years and older
- ★ Pregnant women
- ★ Patients with history of long-term (chronic) medical conditions such as diabetes, high blood pressure and heart conditions, HIV, Cancer, asthma or any condition affecting breathing or lowering immunity.

1.3. HOW TO AVOID GETTING INFECTED?

Multiple acronyms are now being coined for advocacy around COVID-19. These include avoiding the **three C's**: Closed spaces with poor ventilation, Crowded spaces and Close-contact settings such as close-range conversations.



2. COVID-19 MANAGEMENT

2.1. CONFIRMING SIGNS AND SYMPTOMS

- ★ If you are experiencing any of the mild signs and symptoms listed earlier, call your doctor or **any of the following helpline numbers** for advice.

Federal	1166, 115 (Edhi)
Punjab	0800 99000, 0301-1102229, 042 99231669, 042 99231670, 1122
Sindh	021 99204405/0316-0111712
Balochistan	1166
KPK	1700

- ★ Follow the instructions provided through the helplines, and if recommended, get tested for COVID-19. See [Annex 14](#) for details on testing.
- ★ Do not hesitate from getting tested due to fear of being moved to a Quarantine Centre. Due to the rising number of cases, the Government has now allowed home isolation and home management of positive cases and is NOT asking positive cases to move to the Government Isolation Centres. Only those patients who cannot afford to manage home isolation, and ask for a government isolation space, are being guided to the Government Isolation Centre.
- ★ If you go to a laboratory for a test, take essential precautionary measures i.e. wear a mask, avoid touching surfaces, use sanitizer and maintain safe distance i.e. minimum of six feet or two metres.

- ★ Consider **yourself/ family member as COVID-19 positive, and exercise all** the necessary precautions, including self-isolation as you wait to receive the results.

2.2. WHAT TO DO IF YOU HAVE A SUSPECTED OR CONFIRMED COVID19 CASE AT HOME?

If you have a confirmed or suspect case of COVID19 at home, please confirm that the symptoms are mild, and the patient is not a high-risk case (*as specified in 1.2*). High-risk patients can also be managed at home, but you should be in touch with your doctor, so that if their condition deteriorates, they can be taken to hospital immediately.

2.2.1. IMMEDIATE ACTIONS

- ★ For most people, symptoms last 7-14 days and will be mild. However, this will require isolation. Stock up on the essential items **listed in Annex 1** that you will need to manage a COVID-19 positive or suspect case at home.
- ★ Call government or private hospitals in your city to confirm if they are managing COVID19 patients so that you know where to go to in case of an emergency
- ★ Call your physician/ doctor for timely advice
- ★ Get in touch with people with whom the patient may have been in contact with over the last 7 days. Ask them to monitor their symptoms for at least 14 days after their contact with the confirmed patient.
- ★ Download **COVID-19 Govt of Pakistan Application (click here)**, which has a feature called **Pak Nigehbaan**. This feature shows the nearest hospitals and the status of beds and ventilators available.

2.3. FOR THE FIRST SEVEN DAYS

COVID19 confirmed/ suspected patients must isolate for at least seven days even if they feel well. This is critical so that they do not pass the infection on to other people.



It is also important to prepare the patient for expected symptoms i.e. body aches and pain, fever spikes, diarrhoea, breathlessness on little or no exertion, loss of hunger. Most of these symptoms will settle down in 4-6 days. Clinical care has been detailed in [section 2.3.3](#). For isolation, following instructions need to be followed.

2.3.1. MAKE ARRANGEMENTS FOR A SEPARATE ROOM

- ★ Isolate preferably in a room with attached bathroom and adequate ventilation (windows).
- ★ Remove all non-essential furniture and items from the room.
- ★ Place a table outside the room where all hygiene and house-keeping supplies dedicated for patient's care can be stored. See [Annex 1](#) for the list of essential items.
- ★ Keep dedicated thermometer, pulse oximeter and BP apparatus inside the room to regularly assess patient's health.

- ★ Equip the room with spare change of patient's clothes and bed linen (bed sheets & pillowcase) for 7-10 days
- ★ Caregiver can enter room only after wearing personal protection equipment (PPE) in the prescribed order; and discard all disposable items after leaving the room. See [Annex 2, 3 and 4](#) for correct way to wear and remove PPE and wearing mask/ respirator. When care-giver enters the room, patient must also be wearing a mask.

2.3.2. POSITIONING AND BREATHING

- ★ Rest and avoid routine chores like making bed that may cause exertion and breathlessness
- ★ Initially you may get breathless even on sitting for short periods. Try and avoid breathlessness by lying down in prone position as much as possible.
- ★ Do breathing exercises. See [Annex 6, 7 and 8](#) for breathing exercises and managing breathlessness at home. Also watch: https://www.youtube.com/watch?v=bBkGDleQwXo&feature=emb_title by BBC London on breathing for COVID19 patients
- ★ Keep items like mobile charger, medicines, water bottle, dustbin etc close to the bed to avoid unnecessary exertion.
- ★ Avoid taking phone calls or talking too much to avoid exertion and breathlessness.

2.3.3. CLINICAL CARE

RECORDING VITALS

Many patients will be asymptomatic or have mild symptoms.

For patients who are high risk or are more unwell, vitals (heart rate, breathing rate, temperature, blood pressure and oxygen saturation) can be checked every 4-6 hours to see any of the following emergency signs or symptoms:

Vitals	Emergency Signs
Oxygen saturation	Less than 94 percent
Respiratory Rate	More than 30 breaths/ min
Pulse Rate	More than 110 beats/ min
Blood Pressure	Less than 100/60 mm HG
Unable to speak in full sentences	
Increasing confusion	

If any of these signs are present, call the helpline/ your doctor for advice. In case of abnormal vitals, monitor and measure again every 30 minutes. Be prepared for hospital admission.

MANAGING COVID-19 SPECIFIC MEDICINES

- ★ Please consult a doctor for treatment protocol and diagnostic tests.
- ★ Do not self-medicate i.e. do not take medicines without consulting a doctor
- ★ In the following are the medications and dosage being following by COVID-19 confirmed cases for home management:
 - ★ For fever, headache and body aches: Tab Panadol/ Paracetamol 500 mg. You can repeat in case of fever every six hours for a maximum of three times a day.
 - ★ For cough or throat irritation: Tab Azithromycin 500 mg twice a day for five days
 - ★ For cough with sputum or post-nasal drip: Acetylcysteine 200mg powder/soluble granules (locally available as Mucolator) dissolved in water once a day
 - ★ For nasal decongestion: Steam inhalation through nose, or nebulization with normal saline once a day. Patients have also

reported relief when adding 1 tsp Vicks Vaporub to boiling water and inhaling the steam. Also see [Annex 9 and 10](#) for exercises to keep chest clear.

- ★ To avoid coagulation: Tab Aspirin/Loprin 150 mg once a day
- ★ For diarrhoea: ORS sachets dissolved in water 2-3 times a day
- ★ For immunity: Multi-vitamins (C, D3 and Zinc for immunity) once a day
- ★ For allergies with respiratory symptoms – Tab Montelukast 10 mg once a day (at night)
- ★ For allergic rash – Tab Loratadine 10 mg once a day
- ★ To keep nostrils moist if dried – one drop of olive oil in each nostril twice a day

LABORATORY TESTS

- ★ Get tested for Complete Blood Profile (CBC), D-Dimers, Pro-Calcitonin, Serum Ferritin, Serum LDH and CRP.
- ★ If any of the tests are altered/abnormal, repeat the test in two days. If the results continue to deteriorate, call your doctor or the helpline.

MENTAL HEALTH

Stress is a normal response to a difficult situation. Feeling stressed and worried while suffering from symptoms of COVID-19 is natural. Signs of stress may include:

General symptoms	<ul style="list-style-type: none"> ★ Inability to concentrate ★ Persistent negative feelings ★ Constant worrying
Emotional symptoms	<ul style="list-style-type: none"> ★ Feeling unhappy, moody, or angry ★ Feeling overwhelmed ★ Feeling lonely and alone
Physical symptoms	<ul style="list-style-type: none"> ★ Aches and pains ★ Nausea ★ Dizziness ★ Rapid heart rate
Behavioural symptoms	<ul style="list-style-type: none"> ★ Eating more or less ★ Sleeping too much or too little ★ Withdrawing from others

These symptoms may fluctuate over time and may also be experienced by people taking care of COVID-19 patients. If symptoms become severe (see below) and affect your daily functioning then **it is important to immediately consult a specialist.**

Signs of Serious Distress:

- ★ Inability to take care of self or others
- ★ Not knowing name, where they are from, what is happening
- ★ Feeling consistently fearful, angry, or withdrawn
- ★ Thoughts of wanting to die
- ★ Thoughts of wanting to hurt themselves
- ★ Threatening to hurt others

Ways to take care of mental and emotional wellbeing

- ★ Maintain Routine
 - ★ Keep regular routines and schedules
 - ★ Exercise regularly, keep regular sleep routines and eat healthy food. For COVID-19 patients this can slowly begin once they feel better
 - ★ Sleep regularly for at least eight hours a day. Also see [Annex 11](#) for sleeping tips.

- ★ Practice deep breathing, meditation or mindfulness for a few minutes every day
- ★ Stay Connected
 - ★ Keep in touch with friends or family members but must not exhaust yourself
 - ★ Use video-chats to chat with your family taking care of you
 - ★ Stay in touch with friends and family over WhatsApp /text messages
- ★ Self-Care
 - ★ Pay attention to your own needs and feelings
 - ★ Make a daily list of things you are grateful for
 - ★ Do a daily activity, you enjoy or find meaningful or relaxing
 - ★ Listen to music, radio, audiobooks or podcasts
 - ★ Read a book
 - ★ Avoid watching news or social media to manage anxiety

Patients with pre-existing mental health disorders are at higher risk of experiencing an exacerbation of their symptoms. They should ensure the continuity of care with their physician, maintain adherence to their treatment plan and be alert to the signs of relapse.

2.3.4. FOOD MANAGEMENT & UTENSILS HANDLING

- ★ Dedicate a set of essential utensils and keep inside the isolation room (plate, spoon, fork, glass, mug, jug, bowl etc.)
- ★ Receiving food in the room
 - ★ Place washed and dried utensils outside the room on the table and close the door.
 - ★ Family members should put food into the utensils without touching it and leave.
 - ★ Pick the utensils filled with food without touching the surfaces and take it into your room to eat.
- ★ Wash dirty utensils with detergent in the washroom and dry them using tissue papers.
- ★ If care-giver is washing the dishes, caregiver must wear gloves and mask, and avoid spillage and splashing of water as much as possible.

ENSURING NUTRITIOUS DIET

- ★ Take a daily nutritious and balance diet at regular meal timings.
- ★ Take freshly prepared meals
- ★ Diet may include:
 - ★ At least 1 egg
 - ★ At least 2 cups of fruits (dates, apricots, mangoes etc.)
 - ★ At least 2.5 cups of vegetables
 - ★ At least ¾ cup of grains
 - ★ At least 1 serving of meat/ beans
 - ★ At least 8 – 10 glasses of water
- ★ In addition to water, add drinks to daily diet, such as:
 - ★ Apple and ginger juice
 - ★ Lemon in warm water
 - ★ Honey and lemon drink
 - ★ Milk shakes
 - ★ Turmeric in milk
 - ★ Green tea with cinnamon, cloves, ginger, lemon and honey
 - ★ Joshanda
- ★ Take vitamins
 - ★ Tab Zinc or Syp Zental/Zincat 1 tablespoon daily
 - ★ Vitamin B complex 1 daily (surbex or neurobion)
 - ★ Vitamin C (Ca C 1000 in water)

- ★ Vitamin D3 1 daily

2.3.5. HOUSE-KEEPING INSTRUCTIONS

House-keeping instructions must be followed carefully, due to the reason that the coronavirus droplets are known to survive on different surfaces for varying durations. To elaborate this, house-keeping, laundry and related instructions have been elaborated below. Both **Alcohol**² and **Bleach**³ can be used for disinfection.

CLEANING THE ROOM DURING ISOLATION

- ★ Clean all surfaces in the room with disinfectant
- ★ Do not use broom or dry dusting as this may create aerosols.
- ★ Use damp cleaning methods with Alcohol or Bleach solutions as given in the footnotes. This includes wet mopping for the floor and wet rags to wipe surfaces.
- ★ If caregiver is cleaning the room, she/he must wear PPE

LAUNDRY

- ★ Place dirty/ contaminated linen directly into a laundry bag/ plastic liner and place outside the isolation room.
- ★ Instructions for un-infected family members:
 - ★ Wear gloves when collecting the bag.
 - ★ Collect the plastic bag containing the dirty clothes, and empty the bag into the washing machine or a tub. The clothes should be washed with gloves on.
 - ★ Ensure that clothes of COVID-19 patient are not touched by other people in the house. In that case, it happens, the attendant must remove his/her clothes immediately and put them for washing.
 - ★ Wash the laundry with regular detergent in water at 70 °C (160 °F) for at least 25 minutes.
 - ★ Disinfect all surfaces of washing machine after handling laundry of COVID-19 positive cases
 - ★ In case of hand-washing, wear PPE with latex gloves.
- ★ Regularly dispose-off laundry for washing.

WASTE MANAGEMENT

- ★ Place used supplies and garbage waste, including used gloves and masks, directly into garbage bags in the isolation room.
- ★ All waste material must be double-bagged. Once a garbage bag is three-quarters full, tie the bag. Place the first bag in a second bag, which should also be tied and place it outside the isolation room.
- ★ Family members/ attendants must wear gloves when collecting the garbage bag and disposing it.

2.4. AFTER FIRST SEVEN DAYS

COMING OUT OF ISOLATION

Check if the symptoms have resolved (defined as no fever without use of fever-reducing medications and improvement in respiratory symptoms) and decide accordingly.

- ★ If the symptoms are still present, isolation must continue.

² Alcohol, specifically Ethyl Alcohol (70%) is effective against influenza virus, can be used to disinfect small surfaces (e.g. rubber stoppers of multiple-dose medication vials, and thermometers) and occasionally external surfaces of equipment (e.g. stethoscopes and ventilators).

³ Diluted household bleach disinfects within 10–60 minutes contact time, is widely available at a low cost, and is recommended for surface disinfection. If liquid bleach is available, one part of liquid bleach and nine parts of water make 0.5% chlorine solution, which can be used for disinfection of all clothes, surfaces or anything, by applying for at least 10 minutes.

- ★ If the symptoms have resolved:
 - ★ Remain isolated/in quarantine for an additional two weeks after the symptoms resolve, and then end home isolation.
 - OR
 - ★ Get tested for COVID19. If PCR is negative twice on samples collected 24 hours apart, it can be assured that the patient is not infective anymore. End home isolation.



Call your doctor, state helpline at **1166**
or message the Ministry of Health's Facebook Page
for more information

4

CLEANING/DECONTAMINATING THE ROOM AFTER ENDING ISOLATION

Once the patient has recovered and can leave the room:

- ★ Disinfect all surfaces that patient may have come in contact. This includes:
 - ★ Bedroom, washroom, and surfaces like door handles, cupboard handles, water taps, over handles, grab-rails in corridors and stairwells, switch board, kettles and phones.
 - ★ Most of the household disinfectants require a contact time⁵ of at least 10 minutes for proper disinfection.
 - ★ Equipment require an immersion time of at least 30 minutes for proper disinfection.
- ★ Clean washroom with regular detergents and then with disinfectant.
- ★ Clean and dry the equipment used for cleaning and disinfection after each use.
- ★ Clean and wash Latex Gloves with soap and then decontaminate with (0.1%) chlorine solution (1 part bleach and 10 parts water).

3. MANAGING CONTACTS

Persons (including caregivers and health care workers) who have been exposed to confirmed or suspected COVID19 patients, are considered contacts. Contacts must be advised to monitor their health for 14 days from the last day of possible contact with the patient. The contacts should:

- ★ Practise all the preventive steps detailed earlier
- ★ Wear masks
- ★ Stay at home as much as possible
- ★ Avoid contact with other people
- ★ Avoid public transport and public places
- ★ Wash hands with soap and water for at least 20 seconds after entering the house or touching anything that may have been contaminated.

4. RECOVERING AFTER COVID-19

Even after testing negative on PCR, following symptoms may last for weeks or possibly months:

- ★ Severe fatigue
- ★ Ongoing breathlessness
- ★ Muscle weakness
- ★ Cough
- ★ Difficulties in remembering things/confusion

⁴ Graphics: [Wakhra Studios](#)

⁵ Dwell time, or contact time, is the amount of time disinfectants need to remain wet on surfaces to properly disinfect. It may range from 30 seconds to 10 minutes or more for different disinfectants and different organisms.

- ★ Anxiety and Low mood

MANAGING FATIGUE

Routine tasks and chores like housework, bathing, getting dressed or climbing stairs may be more difficult and tiring in the beginning. Patient must:

- ★ Rest well
- ★ Keep frequently used items in easily accessible places.
- ★ Perform tasks at a moderate rate and avoid rushing.
- ★ Allow plenty of time for rest and relaxation.
- ★ Use a timer to take mandatory breaks, initially every 30 minutes, and later increasing to 1,2 3 hours as the energy gets fully replenished
- ★ Take a morning or afternoon nap prior to activities to build up energy.
- ★ Breathe easily and properly during activities.
- ★ Use a shower seat and a hand-held shower head while taking a bath

BREATHLESSNESS AND COUGH

This may take time to settle.

- ★ Practise breathing exercises mentioned in [section 2.3.2](#) and [Annexes 6, 7 and 8](#).
- ★ Ensure good air circulation in the room
- ★ Use wet flannel to cool the area around the nose and mouth to reduce the sensation of breathlessness
- ★ Stay well-hydrated
- ★ Inhale steam
- ★ Drink warm honey and lemon or another warm drink to soothe the throat
- ★ In case of cough with sputum, try lying on either side to drain the sputum
- ★ Also see [Annex 9 and 10](#) for exercises to clear chest.

5. COVID19 – SPECIAL CASE MANAGEMENT

5.1. COVID-19 IN CHILDREN

Children can also be protected using the same precautions listed earlier.

Improve Immunity: Ensure a good routine, with adequate sleep, exercise and nutritious diet. If under 5 years of age, children must have their multi-vitamins daily. If over 5 years of age, they don't need multivitamins, but they do need 800iu of vitamin D every day.

Reduce anxiety: Limit discussions about COVID-19 in front of children. Answer their COVID-19 related questions honestly and calmly. Reassure and teach them how they can protect themselves and their friends.

Managing signs and symptoms: Most children will have much milder illness than adults, with mild to moderate symptoms only, that can be managed safely at home. It is much rarer for children to develop serious complications. Most common symptoms are fever and dry cough. Also see [Annex 13](#).

5.2. COVID19 IN PREGNANT WOMEN

All the evidence to-date suggests that pregnant women are not at any higher risk than any other healthy adults if they develop coronavirus. There is also no evidence suggesting any developmental problems with the unborn baby. A few babies have been diagnosed with coronavirus soon after birth but it is not clear whether they were infected during pregnancy or after delivery. In all these cases though, the newborn babies have been well.

5.3. COVID-19 AND BREAST-FEEDING

There is no evidence that suggests that the virus can be passed on in breastmilk. The benefits of breastfeeding and the protection it gives to the baby outweighs any potential risk of transmission of coronavirus through breastmilk. The following precautions must be practiced before breast-feeding:

- * Mother must wash hands before touching her baby, breast pump or bottles
- * Mother must wear a face mask while breastfeeding
- * Mother should try to avoid coughing or sneezing on her baby

ANNEXURE

Annex 1 - LIST OF ESSENTIAL ITEMS TO STOCK

Essential Medicines	<ul style="list-style-type: none"> ★ Stock up on any prescribed medication that you regularly take ★ Tab Panadol/ Paracetamol 250 mg/500 mg ★ Tab Loratadine 10 mg ★ Tab Aspirin 150 mg ★ Menthol Crystals/ Vicks VapoRub for Steam inhalation ★ Tab Azithromycin 500 mg ★ Acetylcysteine 200mg powder/soluble granules (locally available as Mucolator); ★ ORS sachets ★ Tab/Syrup Multi-vitamins (C, D3 and Zinc); ★ Tab Montelukast 10 mg ★ <i>Please take medication only after consulting the doctor. The normal dosage and frequency of medicines has been provided in section 2.3.3: Clinical Care</i>
Equipment	<ul style="list-style-type: none"> ★ Thermometer ★ Pulse Oximeter ★ Digital or manual blood pressure apparatus ★ Nebulizer
Supplies and protective gear	<ul style="list-style-type: none"> ★ Face Masks ★ Disposable Gloves for clinical care ★ Rubber gloves for cleaning ★ Hand Sanitizer (Alcohol-based) ★ Cotton swabs ★ Soap ★ Tissue Papers and wipes ★ Single-use long sleeved aprons/gowns ★ Plastic aprons ★ Personal Protective Equipment (PPE)
House-Keeping Supplies	<ul style="list-style-type: none"> ★ Detergent for washing clothes (soap, liquid or powder) ★ Disinfectant solution in spray bottles (1-part bleach or Dettol + 10 parts water) ★ Gloves, masks, protective aprons ★ Dusters ★ Garbage/ Dust Bins ★ Plastic liners/garbage bags liners

Annex 2 - WEARING PERSONAL PROTECTION EQUIPMENT (PPE)



- 1**
- Identify hazards and manage risk.
 - Gather the necessary PPE.
 - Plan where to put on and take off PPE.
 - Do you have a buddy? Mirror?
 - Do you know how you will deal with waste?

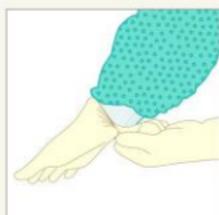


- 2** Put on a gown.



- 3** Put on particulate respirator or medical mask; perform user seal check if using a respirator.

- 4** Put on eye protection, e.g. face shield/goggles (consider anti-fog drops or fog-resistant goggles). Caps are optional; if worn, put on after eye protection.



- 5** Put on gloves (over cuff).

6

⁶ Graphics: WHO Guidelines

Annex 3 - WEARING THE MASK



- 1 Cup the respirator in your hand with the nosepiece at your fingertips allowing the headbands to hang freely below your hand.



- 2 Position the respirator under your chin with the nosepiece up.

- 3 Pull the top strap over your head resting it high at the back of your head. Pull the bottom strap over your head and position it around the neck below the ears.



- 4 Place fingertips of both hands at the top of the metal nosepiece. Mould the nosepiece (USING TWO FINGERS OF EACH HAND) to the shape of your nose. Pinching the nosepiece using one hand may result in less effective respirator performance.



- 5 Cover the front of the respirator with both hands, being careful not to disturb the position of the respirator.

5A Positive seal check

- Exhale sharply. A positive pressure inside the respirator = no leakage. If leakage, adjust position and/or tension straps. Retest the seal.
- Repeat the steps until respirator is sealed properly.

5B Negative seal check

- Inhale deeply. If no leakage, negative pressure will make respirator cling to your face.
- Leakage will result in loss of negative pressure in the respirator due to air entering through gaps in the seal.

Annex 4 - REMOVING PERSONAL PROTECTION EQUIPMENT (PPE)



- 1 - Avoid contamination of self, others and the environment.
- Remove the most heavily contaminated items first.

Remove gloves and gown:

- peel off gown and gloves and roll inside, out;
- dispose of gloves and gown safely.



- 2 Perform hand hygiene.



- 3 - Remove cap (if worn).
- Remove goggles from behind.
- Put goggles in a separate container for reprocessing.



- 4 Remove respirator from behind.



- 5 Perform hand hygiene.

Annex 5 - LIST OF WEBSITES TO FOLLOW AND STAY UPDATED

- * [WHO on general information about COVID-19](#)
- * [WHO – Latest updates on COVID-19](#)
- * [WHO – Advice for Public](#)
- * [Government of Pakistan Website on COVID-19](#)
- * [WHO Guidelines on Home care for patients with COVID-19](#)

Annex 6 - MANAGING BREATHLESSNESS AT HOME⁷

Managing breathlessness at home during the COVID-19 outbreak

Many pre-existing conditions, such as heart or lung diseases, cause breathlessness. Breathlessness can be very frightening and distressing, even in milder cases, and may be worsened by fears relating to the corona virus. During the current corona virus outbreak, you may have reduced access to your usual support networks. It is important that you continue the usual treatments for your underlying conditions (e.g. inhaler). **It's okay to contact your usual health and social care team for support.**

If you think you may have corona virus, please use the 111 online corona virus service to find out what to do (111.nhs.uk). If you are unable to use the online service, please phone 111.

The following steps may help you feel less breathless. You might find some of these steps more helpful than others. Try them out and use the ones that you find most helpful:

Finding a comfortable position can ease your breathlessness, try these:

Sit upright in a comfortable armchair with both arms supported on the chair arms or cushions. Let your shoulders drop and relax. Rest the soles of your feet on the floor.



Sit on a chair and let your body flop forwards. Rest both arms on a table or your knees to support you.



Lie on your side propped up with pillows under your upper body. Tuck the top pillow into your neck to support your head. Rest your top arm on a pillow placed in front of your chest and your top leg on another.



In your comfortable position, loosen your wrists, fingers and your jaw.

Abdominal and tummy breathing

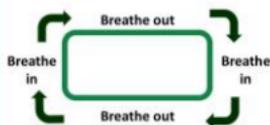
Rest a hand on your tummy and breathe in gently to feel your tummy rise. Then breathe out slowly through your nose or your mouth. Rest and wait for the next breath to come. You may find it helpful to purse your lips while you breathe out slowly as though you were making a candle flame flicker.

Slowing down

When you are comfortable with the tummy breathing, try to slow down the speed of your breathing. When you slow down, your breathing becomes deeper, which is more efficient. Imagine air filling your tummy like a balloon. Practicing regularly will make it easier to do when you are breathless.

Breathe a rectangle

- Once you have found a comfortable position, look around for a rectangle. This might be a window, a door, picture, or even a book or television screen.
- Now follow the sides of the rectangle with your eyes as you breathe, breathing in on the short sides and out on the long sides.
- Gradually slow the speed that your eyes move round the rectangle, pausing at the corners to help slow your breathing.



Cooling the face

Cooling the face, especially around the nose, can help reduce how breathless you feel. Try wiping a cool wet flannel on your nose and upper cheeks of your face. The use of fans is not being recommended during the coronavirus outbreak due to the risk of it spreading infection.

Tips for living with breathlessness at home:



When walking

- Move at a comfortable pace, and breathe steadily
- Avoid holding your breath, or trying to move or turn too fast
- Pace your breathing to your steps; breathe in over one step, breathe out over the next two steps
- Use walking aids if they help you
- Stop and rest whenever you need to.

When climbing steps or stairs

- Use the handrail when climbing stairs and take the steps slowly. Try resting for at least five seconds every few steps.



During day to day activities

- Keep things you use often close to hand
- Have a charged phone close to your bed or armchair
- Plan ahead with your chores or daily activities, such as bathing or housework
- Spread your activity throughout the day
- Have everything you need before you start an activity
- Rest between activities or when your breathing begins to feel uncomfortable.



When feeling anxious

- Remember that this is a worrying time with a lot of uncertainty, so it is natural to feel worried
- There are many ways to deal with worried feelings. These include mindfulness, listening to relaxing music, or doing gentle activity such as gardening, yoga or singing.



When eating and drinking

- Take small meals often, rather than one large one
- Eat smaller mouthfuls
- Avoid foods that are difficult to chew, add sauces when possible
- Drink sips of fluid often to avoid becoming dehydrated.



Keep in touch

- Stay in touch with friends and relatives by using the phone and other technology and writing letters.

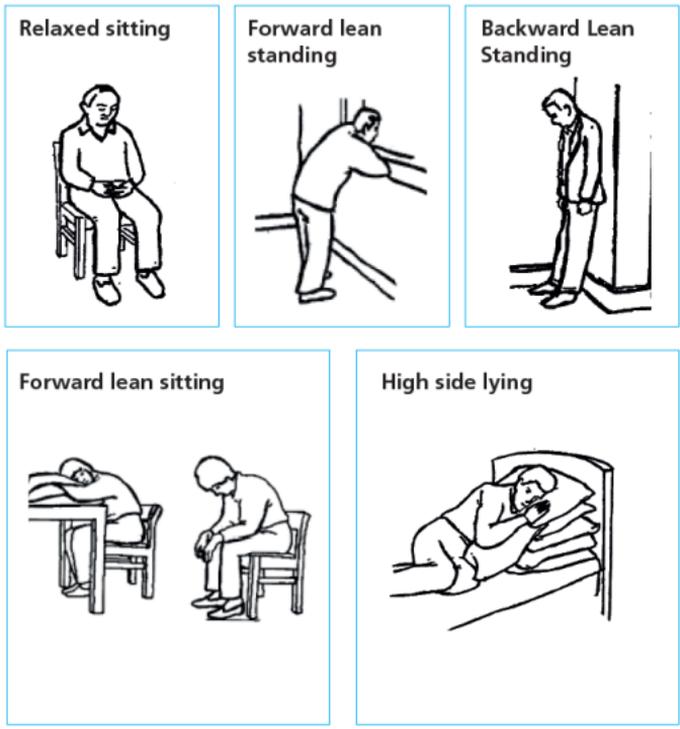


Keep active

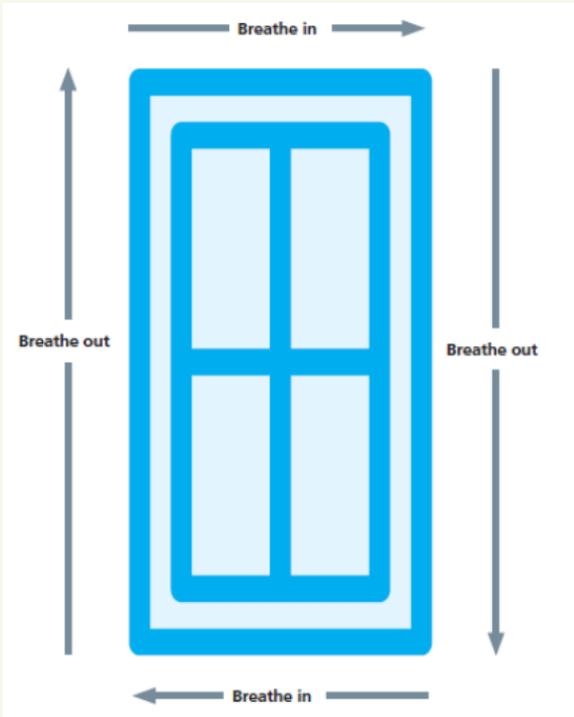
- It is important to stay as active as you can, to prevent your muscles becoming weaker.

⁷ Higginson IJ, Maddocks M, Bayly J, Brighton LJ, Hutchinson A, Booth S, Ogdén M, Farquhar M. on behalf of the NIHR Applied Research Collaborative Palliative and End of Life Care Theme. April 3rd 2020. Managing your breathlessness at home during the corona virus (COVID-19) outbreak.

Annex 7 - POSITIONS TO MANAGE BREATHLESSNESS⁸



Annex 8 - BREATHING A RECTANGLE



⁸ Homerton University Hospital. (2020). ACERS. Post COVID-19 Patient Information Pack

Annex 9 - EXERCISES TO CLEAR CHEST

Following COVID-19 you may find that you have a productive cough and mucus on your chest.

These exercises and positions can help you clear your chest. These may be recommended by your physiotherapist or nurse following COVID-19.

Active Cycle of Breathing Technique (ACBT) exercise consists of three breathing exercises that together help to clear the mucus off your chest.

1. Breathing control

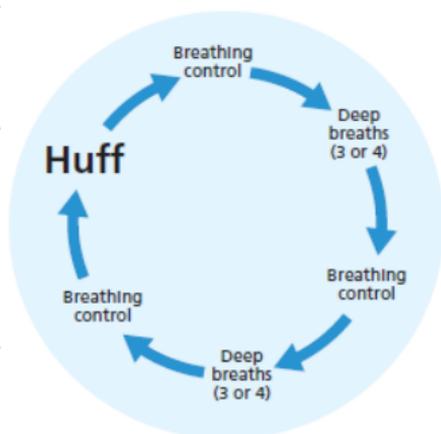
- Gentle, relaxed breathing with your shoulders relaxed

2. Deep breaths

- Breathe in slowly and deeply
- Gently breathe out without forcing it
- Repeat 3-4 times only (too many can make you feel dizzy)

3. Forced expiration techniques (Huff)

- Take a medium sized breath in
- Breathe out forcefully for a short time
- Keep your mouth open and use your stomach and chest muscles
- Think 'huffing' a mirror to polish it
- Repeat 1-2 times
- Always finish on a cough or huff
- Stop when your huff is dry on two consecutive cycles



How often and how long?

- Continue to do until you feel your chest is clearer
- Clear as much mucus as you can without becoming exhausted
- Perform for at least 10 minutes, but no longer than 30 minutes
- If productive 2-3 times per day

Annex 10 - POSITIONS TO KEEP CHEST CLEAR

To drain the upper lobes

- Sit comfortably in an upright position. If you are breathless, you may be unable to tolerate those 'head down' positions, so the following may be used:



To drain the lower lobes -

- Lie on your right lobe side with two or three pillows under your hips.



To drain the middle lobes -

- Lie on your right lobe side with one to two pillows under your hips.



Annex 11 - SLEEPING TIPS

- ★ Keep a consistent sleep schedule. Get up at the same time every day, even on weekends or during vacations.
- ★ Set a bedtime that is early enough for you to get at least 7 hours of sleep.
- ★ Don't go to bed unless you are sleepy.
- ★ If you don't fall asleep after 20 minutes, get out of bed.
- ★ Establish a relaxing bedtime routine.
- ★ Use your bed only for sleeping.
- ★ Make your bedroom quiet and relaxing.
- ★ Keep the room at a comfortable, cool temperature.
- ★ Limit exposure to bright light in the evenings.
- ★ Turn off electronic devices at least 30 minutes before bedtime.
- ★ Don't eat a large meal before bedtime. If you are hungry at night, eat a light, healthy snack.
- ★ Exercise regularly and maintain a healthy diet.
- ★ Avoid consuming caffeine in the late afternoon or evening.
- ★ Reduce your fluid intake before bedtime.

Annex 12 - OTHER RESOURCES FOR MENTAL HEALTH

- ★ [Sleep Hygiene Checklist](#)
- ★ [How Much Sleep Do I Need?](#)
- ★ [How much physical activity is recommended for me?](#)
- ★ [How do I maintain a healthy diet?](#)
- ★ Urdu version of breathing exercises:
<https://www.youtube.com/watch?v=u7kDAIsSWyQ>
- ★ Progressive Muscle Relaxation:
<https://www.youtube.com/watch?v=GZ9PHsbt-m4>

Annex 13 - ADVICE FOR PARENTS DURING COVID19



RED

If your child has any of the following:

- Becomes pale, mottled and feels abnormally cold to the touch
- Has pauses in their breathing (apnoea), has an irregular breathing pattern or starts **grunting**
- Severe difficulty in breathing becoming agitated or unresponsive
- Is going blue round the lips
- Has a fit/seizure
- Becomes extremely distressed (crying inconsolably despite distraction), confused, very lethargic (difficult to wake) or unresponsive
- Develops a rash that does not disappear with pressure (the 'Glass test')
- Has testicular pain, especially in teenage boys

You need urgent help. Call your doctor immediately.



AMBER

If your child has any of the following:

- Is finding it hard to breathe including drawing in of the muscles below their lower ribs, at their neck or between their ribs (**recession**) or **head bobbing**
- Seems dehydrated (dry mouth, sunken eyes, no tears, drowsy or passing less urine than usual)
- Is becoming drowsy (excessively sleepy) or irritable (unable to settle them with toys, TV, food or picking up) - especially if they remain drowsy or irritable despite their fever coming down
- Has extreme shivering or complains of muscle pain
- Babies under 3 months of age with a temperature above 38°C / 100.4°F
- Infants 3-6 months of age with a temperature above 39°C / 102.2°F
- For all infants and children with a fever above 38°C for more than 5 days.
- Is getting worse or if you are worried
- Has persistent vomiting and/or persistent severe abdominal pain
- Has blood in their poo or wee
- Any limb injury causing reduced movement, persistent pain or head injury causing persistent crying or drowsiness

Contact your doctor today.

If the symptoms persist for more than 4 hours and you have not been able to speak to your doctor, take your child to the nearest hospital.



GREEN

If none of the above features are present

- You can continue to provide your child care at home. Information is also available on NHS Choices
- Additional **advice** is available to families for coping with crying of well babies
- Additional **advice** is available for children with complex health needs and disabilities.

Continue to care for your child at home.

Annex 14 - GETTING TESTED

HOW TO GET CHECKED

If you suspect any of the signs and symptoms mentioned in section 1.1:

- ★ Visit a government designated public or private hospital. All district headquarter hospitals and tertiary care hospitals across the country are equipped to collect samples for coronavirus.
- ★ At the hospital, a doctor will check you for symptoms, travel history and other questions to determine if you may have coronavirus.
- ★ If the doctor rules out suspicion of coronavirus, you will be sent back.
- ★ If the doctor comes to the conclusion that you are manifesting symptoms, a swab of your saliva will be taken and sent to one of the designated facilities that have coronavirus testing equipment. This testing will be done free of cost. You may also be sent back home with instructions on isolation without being tested.
- ★ If you are interested in prompt testing, you may go to private laboratories, and pay a fee to get tested.

FACILITIES CONDUCTING TESTS FOR CORONAVIRUS

Sindh

- ★ Advanced Diagnostic Centre - Karachi
- ★ Aga Khan University Hospital - Karachi
- ★ Chughtai Lab, Karachi
- ★ Dow University of Health Sciences, Ojha - Karachi
- ★ Dr Ruth Pfau Civil Hospital - Karachi
- ★ Ziauddin Hospital - Karachi
- ★ Indus Hospital - Karachi
- ★ PNS Shifa - Karachi
- ★ SIUT - Karachi
- ★ Gambat Institute of Medical Sciences - Khairpur
- ★ Liaquat University of Medical and Health Sciences - Hyderabad

Punjab

- ★ Provincial Public Health Reference Lab (PPHRL), PHSD
- ★ Shaukat Khanum Cancer Hospital - Lahore
- ★ Pakistan Kidney And Liver Institute - Lahore
- ★ Nishtar Hospital - Multan
- ★ Chughtai Testing Laboratory (home collection available as well)
- ★ National Institute of Health - Islamabad
- ★ Institute of Public Health - Lahore
- ★ Allied hospital - Faisalabad
- ★ Civil Hospital - Bahawalpur

Khyber Pakhtunkhwa

- ★ Khyber Medical University - Peshawar
- ★ Hayatabad Medical Complex - Peshawar
- ★ Ayub Teaching Hospital - Abbottabad
- ★ Saidu Teaching Hospital - Swat
- ★ Mufti Mehmood Memorial Teaching Hospital - DI Khan
- ★ Rehman Medical Institute - Peshawar
- ★ North West General Hospital - Peshawar
- ★ Anwar lab - Peshawar

Balochistan

- ★ Fatima Jinnah Hospital - Quetta

Azad Jammu and Kashmir

- ★ Abbas Institute of Medical Sciences - Muzaffarabad
- ★ Sheikh Khalifa bin Zayed al Nahayan Hospital (CMH) - Rawalakot
- ★ Divisional Headquarters Hospital - Mirpur

Gilgit Baltistan

- ★ All district hospitals in the area are equipped to collect samples which are then sent to a lab in Gilgit or Skardu for testing

In addition to these facilities, citizens can visit their nearest public tertiary healthcare centre or district headquarter hospital for screening. This list will continue to be updated in subsequent versions of these guidelines.

Annex 15 - LIST OF DOCUMENTS AND GUIDELINES REVIEWED

- ★ WHO (2020) *Critical preparedness, readiness and response actions for COVID-19*. Available at: <https://www.who.int/emergencies/diseases/novel-coronavirus-2019/technical-guidance/critical-preparedness-readiness-and-response-actions-for-covid-19>. (Accessed: 27 March 2020).
- ★ WHO (2020) Considerations for quarantine of individuals in the context of containment for coronavirus disease (COVID-19).
- ★ WHO (2020) Home care for patients with COVID-19 presenting with mild symptoms and management of their contacts.
- ★ WHO (2020) Isolation Rooms-International Health Facility Guidelines.
- ★ WHO (2020). Nutrition Advice for adults during COVID-19 outbreak
- ★ Center for Disease Control and Prevention (CDC) (2020). *Recommended precautions for household members, intimate partners, and caregivers in a nonhealthcare setting*. Available at: <https://www.cdc.gov/coronavirus/2019-ncov/hcp/guidance-prevent-spread.html> (Accessed: 27 March 2020).
- ★ Center for Disease Control and Prevention (CDC) (2020) Coronavirus Disease 2019 (COVID-19). Available at: <https://www.cdc.gov/coronavirus/2019-ncov/symptoms-testing/symptoms.html> (Accessed: 25 March 2020).
- ★ Center for Disease Control and Prevention (CDC) (2020) *Coronavirus (COVID-19)*. Available at: <https://www.cdc.gov/coronavirus/2019-ncov/index.html> (Accessed: 24 March 2020).
- ★ European Centre for Disease Prevention and Control. (2020). Leaflet: information on self-isolation and quarantine after exposure to COVID-19. Available at: <https://www.ecdc.europa.eu/en/publications-data/leaflet-information-self-isolation-and-quarantine-after-exposure-covid-19> (Accessed: 24 March 2020)
- ★ UNICEF (2020) Coronavirus disease (COVID-19): What parents should know. Available at: <https://www.unicef.org/pakistan/coronavirus-disease-covid-19-what-parents-should-know> (Accessed: 24 March 2020).
- ★ Public Health England. (2020). *Guidance: Stay at home: guidance for households with possible coronavirus (COVID-19) infection*. <https://www.gov.uk/government/publications/covid-19-stay-at-home-guidance/stay-at-home-guidance-for-households-with-possible-coronavirus-covid-19-infection> (Accessed: 24 March 2020)
- ★ Public Health England (2020) *Guidance on social distancing for everyone in the UK*. Available at: <https://www.gov.uk/government/publications/covid-19-guidance-on-social-distancing-and-for-vulnerable-people/guidance-on-social-distancing-for-everyone-in-the-uk-and-protecting-older-people-and-vulnerable-adults>. (Accessed: 27 March 2020).
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- ★ Cleveland Clinic. (2020). *COVID-19: Understanding Quarantine, Isolation and Social Distancing in a Pandemic*. Available at: <https://health.clevelandclinic.org/covid-19-understanding-quarantine-isolation-and-social-distancing-in-a-pandemic/> (Accessed: 28 March 2020).
- ★ National Institute for Health Research (2020). Managing breathlessness in COVID19. <https://www.kcl.ac.uk/cicelysaunders/resources/khp-gp-breathlessness-resource.pdf>
- ★ Government of Ireland (2020) Coronavirus (COVID-19) Public Information Booklet.
- ★ Government of Pakistan (2020) National Action Plan for Corona virus disease (COVID-19) Pakistan.
- ★ Homerton University Hospital. (2020). ACERS. Post COVID-19 Patient Information Pack. NHS.

