



Kenya Diabetes Study Group

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Dear Members,

COVID-19: KENYA DIABETES STUDY GROUP (KDSG) STATEMENT ON RECOMMENDATIONS FOR HEALTH CARE PROVIDERS AND PATIENTS LIVING WITH DIABETES

COVID 19 (Coronavirus disease-2019) is a disease that is caused by the Coronavirus subtype SARS-Cov-2 that is responsible for the current global pandemic that we are experiencing. ⁽¹⁾

The virus is closely related to 2 other viruses responsible for preceding outbreaks namely: Severe acute respiratory syndrome (SARS) Coronavirus that was identified in 2003 as well as Middle East respiratory syndrome (MERS) Coronavirus identified in 2012. ^(2,3)

Recent developments across the World and also within our own country with regard to the escalation in the number of confirmed cases have necessitated the introduction and implementation of strict measures to reduce and mitigate further spread of COVID -19. ⁽⁴⁾

These measures will help individuals, families, communities and countries as a whole have a fighting chance against this rapidly spreading disease which has already imposed devastating effects not only on human life, but also on the global economy and the social fabric of life as we know it.

COVID-19 is a highly infectious disease that predominantly affects the respiratory system with the highest morbidity and mortality being noted in the vulnerable patient groups such as the elderly and those with reduced immunity due to several underlying conditions such as diabetes, HIV and cancer amongst others.

Incubation period

The incubation period for the COVID -19 infection ranges between 2-14 days with a median time of 5 days. Individuals can spread the infection even during the period of incubation, with the highest rate of viral shedding seen in the prodromal phase of the infection when the patient is asymptomatic. ^(5,6,9)

Common symptoms:

1. Fever, fatigue and cough are the most common symptoms in adults that occur with a frequency of 99%, 70% and 59% respectively. Shortness of breath occurring at a frequency of 31% is seen in more severe cases. Contrary to common belief, sore throat and rhinorrhea (running nose) only occur in 4% of individuals and likely indicate another viral etiology. ^(7,8)
2. Asymptomatic spread can occur during the prodromal phase (the mean incubation period is ~5 days, with a range of 2-14 days), with viral shedding occurring at its peak when symptoms begin. ⁽⁹⁾
3. A travel history must be sought from every suspected case. This includes a history of travel in the last 14 days from any country with known cases of COVID-19. It also includes history of contact with any individual who has confirmed COVID-19 or suspected to have the disease due to characteristic symptoms plus a history of travel within the last 14 days from any country with known cases of COVID-19. ⁽¹⁰⁾
4. Close contact is defined by the Centers for Disease Control as follows: ⁽¹⁰⁾
 - a. Being within approximately six feet (about two meters) of a patient for a prolonged period of time while not wearing personal protective equipment.
 - b. Having direct contact with infectious secretions while not wearing personal protective equipment.

Vulnerable patient groups as per the CDC classification ⁽¹¹⁾

- Older people (Age > 55 years)
- Pre- existing pulmonary disease
- Cardiovascular disease: Heart failure, Ischemic heart disease
- Hypertension
- Chronic kidney disease
- Chronic liver disease: cirrhosis secondary to viral or alcoholic or auto-immune hepatitis
- Underlying malignancy: Solid tumors and hematological malignancies
- Human immunodeficiency virus (HIV) regardless of CD4 count
- Liver, kidney and other solid organ transplant recipients
- Patients on immunosuppressive/disease modifying therapies due to various underlying conditions such as connective tissue, multiple sclerosis etc
- Pregnant females may be at risk

The following Individuals with diabetes are considered most vulnerable: ⁽¹²⁾

- Those with inadequately controlled diabetes mellitus, specifically with a HBA1c reading > 7.6% or those with recently fluctuating sugars.
- Patients more than 55 years of age.
- Patients with diabetes and concomitant comorbidities such as heart failure, hypertension, chronic obstructive pulmonary disease, chronic kidney disease, cancer and HIV who are already known to have a significant impairment in their immune function.

Specific points relating to diabetes mellitus and COVID-19 infection

- It is important to note that those patients living with diabetes who are well controlled with no significant comorbidities have a significantly lower risk of developing severe complications of COVID-19 and their risk is comparable to that of the general population. ⁽¹²⁾
- The risk associated with COVID-19 infection is similar in individuals who have either type 1 or type 2 diabetes excluding other risk factors such as age, micro and macro vascular complications, comorbidities and glycemic control. ⁽¹²⁾
- COVID-19 infection in individuals who have either type 1 or type 2 diabetes can put them at a higher risk of developing diabetic ketoacidosis. The same standard treatment protocol for managing diabetic ketoacidosis as outlined by the American diabetes association (ADA) is used to treat patients with diabetes who develop diabetic ketoacidosis secondary to COVID-19 infection. ⁽¹²⁾

In individuals with Diabetes we recommend the following measures to prevent COVID-19 infection: ^(12,13)

- Frequent hand washing using the correct technique with water and soap is usually sufficient. If sanitizer is available, it should contain at least 70% alcohol to be considered effective.
- Social distancing - Keeping a one-meter distance from individuals in various spaces.
- Avoid being in crowded places or group meetings of more than 10 people at a time.
- Avoid touching your face.
- Only go to the hospital if it is absolutely necessary.
- For non-urgent clinical cases, we recommend you contact your health care provider and ensure you get a reasonable stock of medication supplies for the next eight weeks. This should be ensured until there is more clarity on the progress of the condition in the country.
- Ensure that you have current phone contacts of your treatment facility and ensure your family members have this contact as well in the event of any emergency.

- Try coughing either into your flexed elbow or a disposable tissue and away from people. Ensure proper and immediate disposal of the used tissues.
- Wear a face mask when coming into a crowded health care facility.
- Avoid non-essential local and international travel during this current phase.
- Avoid all crowded public areas and social gatherings such as in churches, temples, mosques, as well as entertainment areas such as clubs, gyms restaurants and bars.
- Minimize the number of visitors coming into your homes especially for those who are considered high risk individuals as per the criteria noted above.
- Caregivers taking care of patients living with diabetes must always thoroughly wash their hands with the correct technique before and after coming into contact with them.
- All utensils and surfaces must be thoroughly cleaned as frequently as possible.
- Avoid touching common surfaces such as handrails, elevator buttons, door handles, counter tops. If you do so, ensure you wash or sanitize your hands each time you come into contact with them.
- Consult your doctor on phone if you note any form of glycemic variability that is off the recommended patient specific blood glucose targets. In general, the recommended glycemic targets are 5 to 7 mmol/l for fasting blood sugar and 5 to 10 mmol/l for 2-hour postprandial blood glucose.
- Encourage patients to review patient education material on how to avoid and manage hypoglycemia with their family members and caregivers. These materials are available online and can be availed on electronic platforms by clinic staff to patients to ensure preparedness on the part of the patient as well as his/her support system at home.
- Ensure that you have stocked a reasonable supply of strips and ensure your glucometer is well calibrated and in good working condition.
- For those with type I diabetes ensure that you have ketone strips on standby in the event you find you that you have persistent hyperglycemia and symptomatology to suggest impending diabetic ketoacidosis. Contact your clinician on phone in the event of marked hyperglycemia and a ketone reading of > 0.6 mmol/l. If you do not have access to ketone strips, inform your doctor if your sugars remain persistently high.

Recommendations for doctors' inpatient and outpatient clinical practice adapted from the CDC ⁽¹⁴⁾

1. Avoid admitting anyone living with diabetes who does not need to be in the inpatient setting to reduce further contact and exposure since the inpatient transmission rate is estimated to be as high 41% as noted by (Wang D *et al*) ⁽¹⁵⁾
2. Where possible, any elective procedures should be postponed till after the pandemic.
3. The strictest hygiene measures and laid down aseptic techniques of wound care must be observed when dealing with diabetes related wounds that may need frequent dressing such as diabetic foot or post-surgical wounds.
4. Coronavirus can survive up to 8 hours on fabric. It is therefore recommended that staff working in high turnover units such as high dependency units, accident and emergency, intensive care units, chemotherapy centres and dialysis units wear scrubs that can be laundered at the end of the shift to avoid possible transmission of infection to homes of medical personnel.

5. If outpatient clinics have to continue for those patients who need to be genuinely reviewed, ensure the following precautions
 - Avoid crowding at the patient waiting area ensuring the 1-meter distance between patients is maintained.
 - Ensure the waiting area is well ventilated.
 - Any over flow of patients should be advised to wait outside in an open space until their appointment time arrives.
 - A sanitizer must be present at the entrance of the waiting area with a minimum of 70% alcohol and should be used by each patient entering the waiting area.
 - The clinicians, nurses and receptionist staff must avoid shaking hands with the patients.
 - Encourage use of electronic money transfer services for payment of clinical services to avoid coming into contact with currency notes and coins that are known vehicles of transmission.
 - The clinician must wash his hands thoroughly with soap and water following the designated 7 steps of handwashing before and after coming into contact with each patient.
 - We recommend 0.5 % chlorine based solutions to decontaminate all floors, clinical surfaces including countertops, desk tops, tables, chairs.
 - We recommend 0.05% chlorine based solutions to decontaminate all clinic equipment e.g. stethoscopes, blood pressure machines and glucometers to prevent spread of the coronavirus.
 - Ensure the clinicians desktop is sanitized as frequently as possible.
 - Ensure that the examination couch is decontaminated regularly and draped in linen. Tissue liners should be rolled over the examination couch and discarded after each patient is examined.
 - Avoid touching your nose, eyes and face.

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