

THE CORONAVIRUS PANDEMIC AND KIDNEY DISEASE IN GHANA

Globally, everything is virtually on hold. Most countries have declared lockdowns in various forms as a way to curb the spread of this novel Coronavirus. The rate of speed of the virus is astronomical and the death tolls are increasing by the hour. To date, there are as many as 11,591 dying as a result of COVID-19 in Italy with as many as 919 death occurring in a day on the 26th March 2020. As I write this piece, there are 786,608 documented cases with 37,832 deaths and 165,874 fully recovered as at March 31, 2020, 06:56 GMT according to [John Hopkins University](#). In Ghana, we currently have 152 confirmed cases with 5 deaths and 2 recoveries.

Coronavirus is in every conversation irrespective of the socioeconomic status, gender, political affiliation or religious group. There is fear and panic but there are multiple control measures by the World Health Organization (WHO), the Center for Disease Control and Prevention and the Ghana Health Service to help prevent transmission with valuable information via media and all social media platforms to sensitize the public.

Whoever thought the outbreak in Wuhan in the Hubei Province in China reported in December 2019 will lead to a [declaration of pandemic by the WHO](#) by 11th March, 2020 with such high infectivity rate and death rate? The world is indeed a global village and we need to be each other's keeper to help improve health equity in Global Health. This is because if there is an outbreak in one country, the effect can easily extend globally if poorly managed. Conditions should not be seen as only confined to a particular location or country as the world is now a global village.

The complications resulting from COVID-19 are respiratory failure, pneumonia and kidney disease. Kidney disease has been described in up to [9% of covid-19 patients](#) but up to 15% has been described in coronaviruses generally. A broad spectrum of the kidneys' involvement has been described. There is evidence to show that people with COVID-19 can have direct renal consequences. Some studies have shown that 34% of patients have heavy proteinuria on admission, which increases to 63% during admission. Almost 30% have haematuria on admission. There is reduction in the kidney function in 15.5% of patients. With COVID-19 infection and acute kidney injury, your risk of dying in hospital increases remarkably. Some other studies have shown that kidney function is reduced in about a third of patients and in [two-thirds of patient who died](#).

Unfortunately, we have no records of the effect of the virus on the kidneys yet in Ghana as most clinicians focus only on the respiratory symptoms for those admitted and majority are managed remotely as symptoms are not severe. But [an article](#) has been written and published to sensitize clinicians and the general public on the effects of COVID-19 on the kidneys and the need to investigate the kidneys also when managing an COVID-19 infection in Ghana. We hope to publish findings in due course.

In Ghana, we recorded our first 2 confirmed cases from Norway and Turkey on the 12th March 2020 when they presented with symptoms. With the report of these cases, the President addressed the nation banning all public gatherings on the 15th of March, but flights were still operational, and this brought in some more cases, unfortunately. With the upsurge of cases, the borders were then closed on Sunday 22nd March 2020 after we had recorded our first death from COVID-19, which happened to be a community spread as there was no travel history. By then we had 20 confirmed cases according to the [Ghana Health Service](#).

It is presumed we were recording low numbers in Africa overall and in Ghana because most countries were using the [WHO case definition](#), which included history of travel within 14 days from a COVID-19 endemic country, fever and respiratory symptoms. We were probably under-testing and were not picking the cases that were asymptomatic. We also have only two testing centres across the country and this may also delay in picking up cases.

But despite the under testing, we may generally be recording fewer cases in Africa and Ghana and various hypotheses have been suggested that Africa may be getting few cases as a result of the hot and humid climate but this was debunked by the [WHO](#). It is also been suggested that since most infections and deaths occur in people above 50 years and Africa has a generally younger age demography, we may be protected somewhat. For example in Ghana, we have a population of about 30 million people with a [life expectancy of 65 years](#) with only about [3% of the population above 65 years of age](#). Nonetheless we are still recording some cases. Now, the policy of the government is to test all contacts traced and those quarantined and this has increased the number of confirmed cases to 152 currently according to the [Ghana Health Service](#).

According to the situational report of the [Ghana health service](#) on 28th March, 2020, 2,519 persons were tested for COVID-19. Among those tested, 1,276 (50.7%) were persons under mandatory quarantine with 1,243 (49.3%) from routine surveillance activities in Ghana. Among all 2,519 persons tested, 141 tested positive representing 5.6%. Among persons under mandatory quarantine, 79 representing 6.2% tested positive. Among samples tested from routine surveillance, 62 representing 5.0% tested positive.

Only three regions out of the sixteen regions in Ghana have so far recorded cases - the Greater Accra, Ashanti and Upper West Regions from routine disease surveillance. One case has been confirmed in the Upper West Region. The Ashanti Region has recorded 7 of the 8 cases recorded outside the Greater Accra Region. All other 54 cases from routine surveillance were recorded in the Greater Accra Region. On the 29th March, 2020, 11 new cases were confirmed and this included 10 Guinean residents who travelled through Burkina Faso and Togo to Ghana and were picked up by surveillance and screened. They were all found to be positive. A total of 731 contacts of confirmed cases are currently being followed up by the contact tracing team. Among contacts, 53 were found to have symptoms and 48 have been tested with one person testing positive. Two

hundred and thirty-one contacts have completed the mandatory 14-day follow-up according to the [Ghana Health service](#). Ghana finally declared a partial lockdown starting 29th March, 2020 at 01:00GMT and currently in force. This is believed to help reduce the transmission of the virus, which has been shown to also affect the kidneys.

It has been shown that patients with chronic kidney disease and transplant patients are at risk of increased mortality as a result of decreased immunity. We are, therefore, as nephrologists supposed to educate our patients on good hygienic practices to prevent spread.

Patients who are on dialysis are expected to follow strictly all the necessary hygiene protocols to prevent contracting the disease. They are also at increased risk as they are supposed to travel to the dialysis unit 3 times a week and share the unit with other patients. They are even more at risk if they use public transport and the dialysis machines are too close to each other.

Prevention is key as corona virus increases risk of kidney disease and patient with kidney disease are more at risk of infection and death. Patients with kidney disease as well as their families should observe the following.

- 1. Wash your hands as frequently as possible:** Regularly and thoroughly wash your hands with soap and water for at least 20 seconds is every important to prevent spread. You can hum the 'happy birthday' song twice to ensure you are spending enough time with the hand washing. If not available, you can use a hand sanitizer that contains about 70% alcohol.
- 2. Avoid touching your eyes, nose and mouth:** Your hands touch many surfaces and can pick up viruses without your knowledge. Once contaminated, hands can transfer the virus to your eyes, nose or mouth as most are in the habit of touching their faces frequently involuntarily.
- 3. Social distancing: this can be practiced by keeping a safe space between yourself and others:** Maintaining a distance of about 2 meters between yourself and anyone who is coughing or sneezing has been shown to be very effective as droplet cannot travel beyond 1m as its not yet shown to be airborne. Maintaining health social distancing is key to preventing infections.
- 4. Practice respiratory hygiene:** This means covering your mouth and nose with your bent elbow or tissue when you cough or sneeze. Please dispose of the used tissue immediately you are done.
- 5. Clean and disinfect your home:** Practice routine cleaning of frequently touched surfaces like tables, doorknobs, handles, desks, taps, switched and mobile phones) using a regular household cleaning spray or wipe with antiseptics as the virus can stay on surface for hours to days and cause spread.

6. **Avoid crowds as much as possible:** you are cautioned to avoid social gatherings like churches, mosques, funerals and parties to reduce transmission and do not shake hands.
7. **Stay at home:** It's a simple way to further reduce your risk of being exposed and spread if you have the virus. Call the approved numbers to report how you are faring as most may not need admission and hence do not need to be managed in hospitals except in severe cases.

As we collect data to know more about this pandemic, let's remember to stay safe so we do not become a statistic. As the numbers come in, we hope to record the renal complications and will be in a better position to report the effects of COVID-19 on the kidneys of patients seen in Ghana.

Thank you.

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