The Health Authorities in China confirmed the outbreak of a novel Coronavirus in Wuhan city in Hubei Province in China following a series of reported cases of pneumonia of unknown cause in late December 2019. The initial cases were linked to a local seafood and wild animal market, suggesting that the new virus could be a zoonosis. However, it was soon evident that the virus spreads from one person to another, especially when health workers treating the cases identified also developed symptoms.

COVID-19 is mainly spread via respiratory droplets such as when infected person coughs or sneezes onto another person, or from contaminated surfaces (fomites) and hands. Coronaviruses (CoV) are a large family of viruses that cause illnesses ranging from the common cold to more severe diseases such as Severe Acute Respiratory Syndrome (SARS-CoV) and Middle East Respiratory Syndrome (MERS-CoV). As at May 18th 2020, over 4.8 million cases have been confirmed in over 213 countries and territories around the world, with over 316,000 deaths, representing a mortality rate of 3.4% and over 1.8 million documented recoveries.

In Ghana, the first confirmed case of COVID-19 was reported on March 12, 2020, with over 6,486 cases recorded as at the end of third week of May 2020, with 31 deaths and 1,951 recoveries.

CASE DEFINITION OF COVID-19
The disease is characterized by fever and respiratory symptoms such as cough and difficulty in breathing. The following criteria (case definition) is being used to detect and screen suspected cases of COVID-19. Clinicians should also be alert to the possibility of atypical presentations in patients who are immunocompromised, children and other special groups such as pregnant women, among others.

A person presenting with acute respiratory illness (fever and at least one sign/symptom of respiratory disease, e.g. cough, shortness of breath) AND no aetiology that fully explains the clinical presentation OR A patient with any acute respiratory illness AND having been in contact with a confirmed or probable case of COVID-19 in the last 14 days before onset of symptoms; OR A patient with severe acute respiratory illness (fever and at least one sign/symptom of respiratory disease, e.g. cough, shortness of breath; AND requiring hospitalization) AND in the absence of an alternative diagnosis that fully explains the clinical presentation.

Confirmed Case: Suspected case with laboratory confirmation of SARS-CoV2

continue on page 6
EDITORIAL

The novel coronavirus (COVID-19) was confirmed by Health Authorities in China in the Wuhan City of the Hubei Provinces in December 2019. The virus, though thought to be zoonotic, has spread from human to human and affected every continent of the world including Africa. The World Health Organization (WHO) declared the virus infection a pandemic on the 11th of March 2020. There has since been many COVID-19 infections and many mortalities recorded in Europe, United States of America, African and around the world. As at May 18th 2020, there have been over 4.8 million infections worldwide with over 316000 deaths from COVID-19. Many of those who have died are the very elderly and also those that had comorbid diseases such as Coronary Artery Disease, Hypertension, Diabetes Mellitus, Stroke and Immunocompromised Disease including Cancers.

Governments over the world have put in place measures to help prevent the spread of this infection. Among these measures are closure of airports and borders, total or partial "lockdown" and the much preached social (or physical) distancing and the advice for many people to stay at home and avoid going out as much as possible. Many have, therefore, been working from home.

In Ghana, the government has advised “stay home” measures and many have been encouraged to work from home since the third week of March 2020.

Healthcare workers have put up their best to fight this infection with high casualty among healthcare workers in some countries like Italy, United Kingdom, Spain and the USA. Health facilities have been very busy with putting up measures to mitigate the coronavirus infection and in Komfo Anokye Teaching Hospital, there have been several activities and measures put in place for this cause including setting up of the patient holding areas, upgrading of HIU, training and provision of guidelines for staff and patients.. It is in this light that the KATH Editorial Board decided to produce a special COVID-19 edition to highlight the approach that the Komfo Anokye Teaching Hospital has put in place to help combat the COVID-19 pandemic.

This special edition also highlights individuals and groups that have supported KATH in kind or cash to help the fight against the common unseen enemy, the coronavirus. We have also included messages from the KATH-Public Health Unit to guide us as we continue to provide quality and excellent services to those who may be affected by this pandemic.

I hope and pray that our readers enjoy this special edition even as we put into practice all the precautionary measures that KATH has made available to us.

Once again, I want to thank the members of the KATH Editorial Board for their selfless service to our hospital. Thank you very much and may God bless us all.

FROM THE CHIEF EXECUTIVE

To state that we are indeed in difficult times in challenging territories with the outbreak of the COVID-19 pandemic is to state the very obvious. Globally, no country or institution has remained unscathed. The effect of the outbreak on the health sector the world over has been particularly devastating to say the least. Facilities and other resources of health institutions throughout the world have been stretched beyond unimaginable limits even in countries with comparatively low numbers of COVID-19 cases.

At the Komfo Anokye Teaching Hospital, the effect of the pandemic cannot be said to be any different as it has equally and adversely affected our operations. The outbreak has forced the re-direction and unplanned allocation of vital resources to the development, expansion and upgrading of facilities for the tracing, screening, isolation, diagnosing and treatment of COVID-19 patients. This has been compounded by the huge combination of the steep increases in the cost and utilization of medical and non-medical consumables arising out of responsible and much needed protection for our staff, patients and visitors leading to the rapid rise in the demand for such items at KATH, nationally and globally. The end result of these developments has been the quantum leap in the cost of operations at the hospital. Meanwhile, patient numbers have tumbled to a trickle since the outbreak of the pandemic in the country resulting in massive drop in revenue.

Currently, the use of N-95 respiratory masks at the hospital has increased about ten-fold, normal facemasks four-fold and hand gloves also tripled. The in-house production of alcohol hand rub by the hospital’s Drug Manufacturing Unit has now jumped astronomically as the utilization has increased steeply from 400 of the 500-milliliter bottles per week to 3,200 bottles weekly. The cost of the production inputs and other Personal Protective Equipment (PPE) has unfortunately, kept escalating. A piece of normal face mask which used to cost GHS 0.19 is now going for GHS 5.0 and that of N-95 respiratory mask has jumped from GHS 8.0 to GHS 25.0 per piece representing 2631% and 312% increments respectively. These are indeed very challenging times.

Notwithstanding the above, Management wishes to assure all that everything possible is being done and will be done to prioritize the safety of members of staff and patients by making the necessary investments and interventions that will ensure the hospital play its expected roles in the management of the pandemic in line with our core mandate as the only tertiary health care facility in this part of the country.

I am most grateful for the unlimited sacrifices and effective leadership exhibited by members of the hospital’s teams in charge of the management of COVID-19 related clients which have helped to strongly position KATH as one of the well prepared facilities for the pandemic in the country. I would like to particularly acknowledge the key roles played by the hospital’s COVID-19 Response Teams with memberships drawn from all the Directorates and Units.

I wish to also specially recognize the yeoman’s role played by the Heads of the various Directorates and Units, clinical and non-clinical, for the key and challenging leadership provided in guarding and assuring work at the various operational areas. On the outset and as part of the national
response and social/hygienic protocols for managing the pandemic, Management instituted a new protocol for the provision of essential and urgent services by the clinical Directorates and Units through the provision and publication of dedicated telephone numbers to enable patients call for important consultations, schedule date and time specific appointments and in addition continue to access care via walk-in referrals for all the specialist services of the hospital. Canopies and more chairs have also been provided to ensure more space at the various OPDs. Earlier, Management had restricted each inpatient to a maximum of two visitors per visiting time. These services and measures have been introduced to assure us all of the important protocol of social distancing at all the operational areas, especially the OPDs which had previously been overcrowded.

It is my hope that as a tertiary hospital, we will continue to lead with the requisite innovations and deliver on our mandate in these difficult times. Together, we shall overcome.

On behalf of the Board and Management, I wish to extend a special gratitude to His Excellency, President Akufo-Addo, the Hon. Minister for Health and the Sector Ministry for the provision of much needed PPE which have been very difficult to access, even for purchase at expensive prices.

I also wish to place on record my heartfelt appreciation to all the philanthropic donors who have come to the aid of the hospital to improve our operational capacity to deal with the pandemic. We have published the detailed contributions of all such benefactors in this special COVID-19 edition. I wish to further assure all donors that every pesewa, equipment and other supplies received will be applied to good use and for the purpose for which they were donated.

So far it has been a great regional organizational response led by Honourable Simon Osei Mensah, Ashanti Regional Minister and also involving the Regional Health Directorate, the Security Agencies, Religious Organizations, the Media and Bus Rapid Transit (BRT) also known as Adehyee Services among others.

In conclusion, I wish to urge all to continue to observe and help/encourage others to observe all the protocols necessary in fighting the pandemic. They include, wearing of face mask at all public places, observance of social distancing in everything we do and everywhere, no hand shaking, no hand rubbing of the face especially mouth, nose, eyes and ears, regular hand washing with soap under running water OR regular use of alcohol-based sanitizer for disinfection of the hands, good respiratory hygiene via use of tissue paper to protect all produce/droplets of coughing and sneezing and immediate disposal of tissue paper in water closet or dustbin, good nutrition with fruits and vegetables, regular body exercise and STAY AT HOME as much as possible unless it is essential to go out.

There is no doubt that the pandemic will continue to ravage the economies of countries and put enormous pressure on health systems for some months to come. We will have to continue to find innovative ways of maintaining the necessary services to respond to the needs of our clientswithout engendering the safety of our members of staff and the cherished clients.

In our justified quest to stop the spread of the COVID-19 pandemic we simply cannot abandon our patients to their fate and certain death irrespective of their conditions. By thinking creatively, we can achieve great success.

**DEDICATED TELEPHONE NUMBERS FOR ESSENTIAL AND URGENT SERVICES**

**MONDAY - FRIDAY 8:00AM - 5:00PM**

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<tr>
<th>DIRECTORATE/UNIT</th>
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<tr>
<td><strong>1. Eye Centre</strong></td>
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<tr>
<td>a. Paediatric Ophthalmology</td>
<td>024-8541461</td>
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<tr>
<td>b. Corneal Clinic</td>
<td>020-4762002</td>
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<td>c. Oculoplastic Clinic</td>
<td>020-4762003</td>
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<td>d. Retina Clinic</td>
<td>020-4761994</td>
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<td>e. Glaucoma Clinic</td>
<td>020-4761993</td>
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<tr>
<td><strong>2. Psychiatry Clinic</strong></td>
<td></td>
</tr>
<tr>
<td>057-723 3943/ 032-2200157</td>
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<tr>
<td><strong>3. Obstetrics &amp; Gynaecology Clinics</strong></td>
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<tr>
<td>Consulting Room 8 (ANC)</td>
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<td>059-5779784</td>
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<tr>
<td></td>
<td>032-2498314/032-2498315</td>
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<tr>
<td>b. Physiotherapy/ Rehabilitation Clinic</td>
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<td>c. Palliative Care Clinic</td>
<td>055-3518085</td>
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<td><strong>6. Trauma &amp; Orthopaedic Clinics</strong></td>
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<td></td>
<td>059-5637575/050-0269124</td>
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<td><strong>7. Ear, Nose &amp; Throat Clinic</strong></td>
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<td></td>
<td>059-6597461/059-6597462</td>
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<td><strong>8. Surgery Clinics:</strong></td>
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<tr>
<td>a. Consulting Room 9</td>
<td>032-2497788/032-2497786</td>
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<tr>
<td>b. Surgery OPD Records (Biostatistician)</td>
<td>032-2497786</td>
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<tr>
<td>c. Breast Clinic OPD</td>
<td>032-2498352</td>
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<td><strong>9. Oncology</strong></td>
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<td><strong>10. Oral Health Clinics</strong></td>
<td>024-3792610</td>
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<td><strong>11. Internal Medicine:</strong></td>
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<td>a. Consulting Room 1</td>
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<td>b. Diabetes Clinic</td>
<td>050-5600366</td>
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<td>c. Renal Clinic/Dialysis Centre</td>
<td>050-560043</td>
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<tr>
<td>d. Chest Clinic</td>
<td>050-8868006</td>
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<tr>
<td><strong>12. Anaesthesia and Intensive Care</strong></td>
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<tr>
<td>054-8438729</td>
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<tr>
<td><strong>13. Radiology</strong></td>
<td>059-2768067</td>
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<td><strong>14. Laboratory Services:</strong></td>
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<tr>
<td>a. Laboratory</td>
<td>054-8524345(COVID-19)</td>
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<tr>
<td>b. Mortuary</td>
<td>055-6985372</td>
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<tr>
<td><strong>15. Dietherapy Unit</strong></td>
<td>050-0635811/050-1916691</td>
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<tr>
<td><strong>16. Transfusion Medicine Unit</strong></td>
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<tr>
<td>a. Blood Bank (A&amp;C)</td>
<td>050-8874341</td>
</tr>
<tr>
<td>b. Donor Clinic</td>
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<tr>
<td>c. Donor Services</td>
<td>050-2735096</td>
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KATH’S APPROACH TO COVID-19 FIGHT

The hospital, being the second largest in the country has put in several mechanisms to deal with any emerging threats since the first case of the disease was announced on March 12, 2020.

These mechanisms have been grouped into three areas:

- PREVENTION
- CONTAINMENT
- TREATMENT

PREVENTION

All clinical directorates and units were tasked in the initial stages to constitute Response Teams that will handle all suspected cases that may report in their directorates and units. The Public Health Unit has embarked on a series of training programmes for these response teams in addition to training other staff. These trainings have not been limited to doctors and nurses, but also involved other allied health personnel including orderlies, cleaners and admission team members. The latter have been trained specifically in identifying potential COVID-19 patients and segregating them for the doctors and nurses to appropriately triage them. The training sessions have been designed for the trainees to disseminate information to all staff in their directorates/units. Selected doctors and nurses from all directorates have been trained by Public Health staff in the proper collection of samples from suspected cases. These samples are then properly packaged by staff from Public Health Unit and transported to Kumasi Centre for Collaborative Research (KCCR) for analysis. Educati

Management has ensured the continuous availability of personal protective equipment (PPE) and other consumables amid worldwide scarcity, to ensure staff are protected while going about their normal duties. The Pharmacy Manufacturing Unit has quadrupled the production of alcohol-based hand sanitizers for use by staff while at work. Veronica buckets have been placed at all entry points in the hospital for use by staff, patients and relatives. Thermal thermometers have been issued to all directorates to be used for screening at all entry points in the hospital.

CONTAINMENT

A special triage area has been created at the A & E with support of NADMO and other benefactors providing tents and canopies respectively, to ensure safety and privacy for staff and patients. Management has constructed a Holding Bay at the Disaster Floor of the Emergency Medicine Directorate to hold suspected patients till the results of their samples are received. Both the triage area and Holding Bay have been equipped with gadgets and supplies needed to treat patients till they are finally moved to the wards or discharged home upon receipt of their sample results.

Similar containment areas have been created by the Family Medicine Directorate for cases that end up in that sections of the Hospital.

All other clinical Directorates and Units have identified and set aside cubicles and wards to contain suspected cases until results of samples taken are received.

Special canopies have been provided at all clinical areas to assist in social distancing in order to continue rendering services to patients.
TREATMENT
The Highly Infectious Isolation Unit (HIIU) which has five beds has been rehabilitated to receive patients needing hospital treatment. The unit has been equipped with four (4) patient monitors, two (2) ventilators, suction machines, oxygen cylinders with flow meters as well as medical supplies enough to manage patients for three (3) months. The piped oxygen outlets on the ward have also been fitted with flow meters. The two (2) adjoining wards of the Family Medicine directorate have been emptied of patients and temporarily appropriated by Management to serve as an extension of the Treatment Centre in the event of a high influx of patients. These wards are being renovated and upgraded to serve that purpose. Two (2) HIIU Teams made up of doctors, nurses and other allied health staff have been assembled, drawn mainly from staff that handled the recent H1N1 outbreak. Request for volunteers to join this team has been largely successful such that we are constituting a third HIIU Team. This will ensure staff who work in the treatment centre get enough rest in-between their schedules to reduce contact hours with cases. An Emergency Respiratory Support Team has also been constituted, made up of Anaesthesiologists and Critical Care Nurses. This team has had simulation trainings in managing patients. All staff working in the Treatment Centre are fully catered for by the Hospital regarding meals, water and immune boosting supplements. We have up to date had eleven (11) patients in the treatment centre: 2 mortalities, 3 full recovery and 5 currently on admission.

OTHER MEASURES
1. Normal clinical services at the Specialist OPDs and elective surgical operations have been suspended till further notice. However, all clinical directorates have been tasked to continue offering services to patients and clients requiring them by using the hotlines that have been publicized. Non-emergency but urgent surgical operations are also permitted after discussions with the relevant stakeholders.
2. The Maternity, Paediatric Emergency Unit and all diagnostic services (Radiology & Laboratory) are offering full services as before.
3. A special COVID-19 laboratory has been set up by the Laboratory Services Directorate using the Haematology laboratory at the Polyclinic. This lab is functioning to run all test requests from patients being managed for Coronavirus infection. Lab Scientists working in this lab have been specially trained by the Public Health Unit and scientists from the KCCR. It must be noted that this lab does not currently take samples to test for COVID-19.
4. The Transfusion Medicine Unit is embarking on a special donation drive to ensure the blood bank does not go dry in this period since we are still running clinical services.

APPR ECIATION
My profound appreciation goes to ALL staff who have helped manage the situation till date under these trying moments. No group can be singled out for mention. We are working under very stressful conditions, but together we shall surely succeed. God bless us all!!!
EFFORTS AND CHALLENGES OF COVID-19 MANAGEMENT  

SAMPLE TAKING AND LABORATORY TESTING

Appropriate samples for testing include nasopharyngeal or oropharyngeal swab, sputum, blood or lung tissue (biopsy or autopsy sample).

The recommended sample is nasopharyngeal and oropharyngeal swab, transported to the lab in Viral Transport Medium (VTM). In the absence of nasopharyngeal swabs or lack of skill to perform the procedure, a sputum sample may be collected ensuring the utmost in infection prevention practices i.e. patient producing sputum at least 3 meters away and in an open place. Nasal washouts (nasal syringing) can also be performed to collect samples for laboratory testing.

Collection of sample should be undertaken with appropriate PPE (N95 mask, clean long-sleeved gown and gloves and eye protection (goggles or face shield). All PPE are available at the medical stores and appropriate numbers should be stocked at emergency and clinical service points.

Viral testing for SARS-CoV-2, the virus that causes COVID-19 is performed using reverse transcription polymerase chain reaction (RT-PCR) test at the Kumasi Centre for Collaborative Research (KCCR) at the Kwame Nkrumah University of Science and Technology (KNUST) and Noguchi Memorial Institute for Medical Research (NMIMR) in Accra. In KATH, all samples taken from suspected patients are sent to KCCR for testing. So far, 697 samples have been taken and sent to KCCR, with 40 positive cases, giving a positivity rate of 5.7%.

INFECTION PREVENTION CONTROL MEASURES

The most proven protection against contracting COVID-19 is through strict adherence to infection prevention and control practices. All healthcare workers are encouraged to step up universal precautions and infection prevention and control (IPC) practices.

Frequently clean hands before and after each patient-care activity by using soap and running water for at least 40 seconds. When handwashing with water and soap is not feasible (at patient bedside, away from sinks, etc.), alcohol-based hand rub, containing at least 60% of alcohol should be used, following the same hand washing motions for at least 20 seconds.

Ensure you practice respiratory etiquette by covering your mouth or nose with flexed elbow or tissue wipes when coughing or sneezing. Immediately discard the tissue wipe into a dustbin and wash hands with soap and water/alcohol hand rub. Teach patients, patient relatives and others to do same. People observe you as a health worker and learn. Take the lead in ensuring good practice of respiratory etiquette so that it is easier to teach others.

All patients with respiratory symptoms (cough, rhinorrhea, etc.) should promptly be given a face mask and teach them how to use it properly. Masking a patient achieves source control (controlling the source of infectious droplets) and reduces the risk of aerosols and droplets that can contaminate surrounding surfaces that may later contaminate healthcare workers (HCWs). Explain the purpose of using the face mask and ensure compliance.

Wash your hands frequently. Wash for at least 40 sec - 60 sec as shown below:

If water is not available, perform hand hygiene with alcohol hand-rub (for at least 20 seconds)

5 MOMENTS FOR HAND HYGIENE:

1. Before touching a patient
2. Before engaging in clean/aseptic procedures
3. After body fluid exposure risk
4. After touching a patient
5. After touching patient surroundings

For COVID-19 prevention, remember to wash or sanitise your hands regularly especially after touching any frequently used/touched surfaces such as nurses’ station, patient folders, trolleys, door handles, door posts, etc!

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COVID-19 RISK ASSESSMENT AND MANAGEMENT OF EXPOSURE OF HEALTHCARE WORKERS (HCW) AT KATH

**COVID-19 SPECIAL EDITION - MAY 2020**

**KATH NEWS**

**RECOMMENDATIONS FOR HCWS AT HIGH RISK FOR COVID-19:**
- Stop all health care interactions with patients for a period of 14 days after the last day of exposure to a confirmed COVID-19 patient.
- Be tested for COVID-19.
- Quarantine for 14 days in a designated setting.

Health care facilities should:
- Provide psychosocial support to HCW during quarantine, or throughout the duration of illness if HCW is confirmed to have COVID-19.
- Provide compensation for the period of quarantine and for the duration of illness (if not on a monthly salary) or contract extension for duration of quarantine/illness.
- Provide review of IPC training for the health care facility staff, including HCWs at high risk for infection after 14-day quarantine period.

**RECOMMENDATIONS FOR HEALTH WORKERS AT LOW RISK FOR COVID-19:**
- Self-monitor temperature and respiratory symptoms daily for 14 days after the last day of exposure to a COVID-19 patient. HCWs should call the health care facility if they develop any symptoms suggestive of COVID-19.
- Reinforce contact and droplet precautions when caring for all patients with acute respiratory illness and standard precautions for all patients.
- Reinforce airborne precautions for aerosol-generating procedures on all suspected and confirmed COVID-19 patients.
- Reinforce the rational, correct, and consistent use of personal protective equipment; Apply WHO’s “My 5 Moments for “Hand Hygiene” before touching a patient, before any clean or aseptic procedure, after exposure to body fluid, after touching a patient, and after touching a patient’s surroundings.
- Practice respiratory etiquette at all times.

**MANAGEMENT OF HCWS EXPOSED TO COVID-19 VIRUS**

**HEALTH WORKER SHOULD BE CONSIDERED NOT EXPOSED TO COVID-19 VIRUS**

If NO for any of the questions above

**HEALTH WORKER SHOULD BE CONSIDERED EXPOSED TO COVID-19 VIRUS**

If YES for any of the questions above

**IF HCW RESPONSE:**

- **ALWAYS AS RECOMMENDED**
  - DURING A HEALTH CARE INTERACTION WITH A COVID-19 PATIENT, DID YOU WEAR PERSONAL PROTECTIVE EQUIPMENT (PPE)?
    - Single-use gloves, medical mask, face shield or goggles, protective glasses, disposable gown.
  - DURING AEROSOL-GENERATING PROCEDURES ON A COVID-19 PATIENT, DID YOU WEAR PERSONAL PROTECTIVE EQUIPMENT (PPE)?
    - Single-use gloves, N95 mask, face shield or goggles, protective glasses, disposable gown, waterproof apron.
  - DURING A HEALTH CARE INTERACTION WITH A COVID-19 PATIENT, DID YOU HAVE ANY TYPE OF ACCIDENT WITH BODY FLUID/RESPIRATORY SECRETIONS?
    - Splash of biological fluid/respiratory secretions in the mucous membrane of eyes, mouth/nose, nonintact skin or puncture/sharp accident.

**IF HCW RESPONSE:**

- **LOW RISK**
  - Then they are considered low risk.
- **HIGH RISK**
  - Then they are considered high risk.

**IF HCW RESPONSE:**

- **NO**
  - If HCW response: NO.
- **YES**
  - If HCW response: YES.

*'Always, as recommended' means more than 95% of the time; 'Most of the time' means 50% or more but not 100%; 'Occasionally' means 20% to under 50% and 'Rarely' means less than 20%.*
CURRENT PROTOCOLS FOR MANAGEMENT OF COVID-19

MANAGEMENT OF A SUSPECTED CASE OF COVID-19
If a case of COVID-19 is suspected within the Hospital, please ensure the following:
Immediately protect yourself and other HCWs by ensuring universal precautions. Ensure that you use an N95 face mask and any other appropriate PPE as the situation may demand.
Ensure respiratory isolation of patient (source control) by giving a face mask and teaching them how to use it properly. Explain the purpose and use of the facemask and ensure compliance.
Nurse patient in a well-aerated area at least 3 meters from other patients. Familiarize yourself with the protocols within your Directorate for isolating and taking samples from such suspected cases. Communicate with the Directorate leadership (designated person(s) within the directorate, chief resident, nurse manager, lead clinician, or head of directorate) to discuss and agree on the way forward. Your Directorate will alert the Public Health Unit as soon as possible.

When a case of COVID-19 is confirmed, it may be managed at the KATH Isolation unit or managed on home basis as the assessment may be. This decision will be taken in consultation with the appropriate authorities taking into consideration the general condition of the patient, any comorbidities or risks, living conditions and existing arrangements for follow up.
If staff are deemed to be exposed (coming into contact with a confirmed case without appropriate or recommended PPE), an assessment is conducted using internationally acceptable screening tools to determine risk levels. Such staff are counselled and supported. Staff with appreciable risk may undergo active quarantine or self-quarantine with monitoring. Staff will be periodically tested to rule out any infection before being allowed back to work. The Hospital has laid down support systems to ensure that such staff receive all the assistance they may require.

CLINICAL MANAGEMENT OF COVID-19
Severe COVID-19 may present as a severe acute respiratory illness (SARI). Currently, there is no definite drug treatments for COVID-19. Early supportive therapy and monitoring include:
- Supplemental oxygen therapy to reach target SpO2 > 90-95%. Use a disposable, single use oxygendeivery mask. Observe contact precautions when removing and disposing off the used oxygen mask.
- Conservative fluid management when there is no evidence of shock. IV fluids should be used cautiously. Identify sepsis and treat appropriately. Empiric antibiotic treatment should be based on locally prevalent causes of pneumonia.
- Close monitoring of vitals and signs of clinical deterioration such as rising temperature, worsening respiratory rate and signs of sepsis.
- Recommended national guidelines for treatment of confirmed COVID-19 cases include the use of Hydroxychloroquine and Azithromycin whilst monitoring for side effects and complications. Some antiviral medications are also recommended as second line treatments if indicated.

CONCLUSION
Coronavirus Disease 2019 (COVID-19) has the ability to stretch healthcare resources and capacity of any country, and Ghana is no exception. Actions to prevent and curb the spread of the disease represents the best approach to avoid a total collapse of our health system and the burden on its human resources in terms of workload and morbidity or mortality to health workers. All health workers therefore have an important role to play in leading the campaign of public education, infection prevention and rational use of PPE to protect themselves and to ensure continuous availability.
Let us all join hands to wash our hands frequently, educate our clients and use PPE appropriately to ensure a safe work environment and let's encourage our friends, family and the general public who are not essential service workers to stay at home.

by Dr. Ruth Owusu and Dr. Joshua Arthur – Public Health Unit.
As governments all over the world including Ghana put in place measures to help prevent the spread of COVID-19, people are advised to stay at home, and if possible, work from home.

With people staying and working from home, there is an increase in prolonged sitting or reduced physical activity together with an increased intake of calories and these together increase the risk of cardiovascular diseases and worsens it for those who already have it. Prolonged sitting or lack of physical activity usually leads to increased risk of deep vein thrombosis (DVT) and pulmonary embolism (PE); especially in people with high risk for developing DVT such as people with cancers, family history of DVT, cardiovascular diseases or cardiovascular disease risk factors (obesity, diabetes mellitus, hypertension, etc).

With this background, the DVT Team of the Cardiology Unit at the Department of Medicine of the Komfo Anokye Teaching Hospital has decided to educate the general public to be aware of the dangers of increased risk for DVT during the lockdown period.

The following are recommendations to be practiced at home during the lockdown period.

1. Perform regular physical activity during the daytime.
   a. It is recommended that one should not sit for more than one hour without having to stretch out or make some movements of the body. We could set timers on our mobile phones or computers to give hourly reminders to walk around the house or stretch the legs for about 5 to 10 minutes.
   b. One can also, in addition to the above, do some aerobic exercises in the morning and in the evening. This could be a whole family time and it could be at the living room or any available space in the house. Music, if available will be a helpful accompaniment.
   c. Working from a standing desk (if available) is also recommended as this allows individuals to move the legs often.
   d. Engagement in homemade activities such as cleaning, weeding the backyard, learning to trim the hedges are helpful. Cooking time could be shared by all adults.

2. Reduce intake of calories
   a. It is important not to use this period to take in everything junk. Healthy cooking and healthy eating are advised. Avoid high intake of food with high calories such as the fizzy drinks
   b. Increase intake of fruits and vegetables as well as intake of water regularly is advised if there is no contraindication

As we stay at home, there is the need for each and every one to look out for the symptoms and signs of DVT as early diagnosis and prompt treatment can help prevent fatal complications such as pulmonary embolism.

Look for the following:
- Leg swelling (usually unilateral)
- Sudden leg pains
- Darkened (or reddening) of the legs
- Visible skin veins.
- Increase warmth of the legs

Any of the above which occurs suddenly could alert the possibility of a DVT and therefore the need for urgent medical attention to ascertain whether or not one has DVT.

It is also very important for everyone who is on medication for chronic medical conditions such as hypertension, heart failure, diabetes mellitus, stroke, DVT and malignancies to adhere to their medications very well, especially during this period to reduce the risk of complications from non-compliance of treatment.

Everyone is encouraged to ensure physical distancing, regular washing of hands with soap and running water, use alcohol based hand sanitizers and use face mask when going out of your home.

By Dr. Collins Kokuro – Cardiologist/Physician Specialist/Lecturer-KNUST/KATH/DVT Team (on behalf of the Cardiology Unit/DVT team-KATH)

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**TRANSFUSION MEDICINE SPECIAL BLOOD DONATION DRIVE**

The outbreak of COVID-19 has reduced blood supply to the Blood Bank drastically. All mass blood collections aren’t possible because schools, colleges and religious bodies with majority of blood donors are closed.

**PATIENTS CANNOT WAIT FOR BLOOD**

Do walk in to donate blood to save lives

Or call 0508874351

Transfusion Medicine Unit - KATH
Chest X-Ray Findings of COVID-19

Chest X-rays (CXR) are usually the first-line imaging for respiratory illnesses. The lack of widespread CT availability in parts of the world including Ghana predicates that portable chest radiography (CXR) will likely be the most commonly utilized modality for identification and follow up of lung abnormalities.

Can I use CXR as a screening tool?
CXR utilization may be important for early disease detection in regions with limited access to reliable real-time reverse transcription polymerase chain reaction (RT-PCR) COVID testing.

Indication
- Imaging is indicated in a patient with COVID-19 and worsening respiratory status
- Imaging is not indicated in patients with suspected COVID-19 and mild clinical features unless they are at risk for disease progression
- In a resource-constrained environment with limited RT-PCR availability, imaging is indicated for medical triage of patients with suspected COVID-19 who present with moderate-severe clinical features and a high pretest probability of disease

If I have a CT scan Should I use it ?
Infection control issues related to use of CT suites and CT decontamination required after scanning COVID-19 patients result in disruption in efficient flow of radiology services and disruption of radiological service availability. Portable chest radiography may be preferentially considered to minimize the risk of cross-infection. In cases of high clinical suspicion for COVID-19, a positive CXR may obviate the need for CT.

Features of COVID 19 X-rays
- Ground glass opacities in a peripheral distribution at the middle to lower lung zones (Figure 1)
- Patchy or diffuse asymmetric airspace opacities (Figure 2)
- Bilateral multifocal consolidations that may progress to involve entire lungs (Figure 3)

Some Points to Note
- CXR findings not specific for COVID-19 disease and may overlap with those of other pulmonary conditions
- May be read as normal in the early stages or in patients with mild disease
- In severe disease, CXR may resemble pneumonia or acute respiratory distress syndrome (ARDS)

Fig. 1. Bilateral peripheral ground-glass opacities in a 59-year old female with confirmed COVID-19. She presented with a 3-day history of fever, difficulty breathing and generalized weakness.

Fig. 2. 53-year old immunocompromised male patient presenting with cough, fever, dyspnoea, sore throat and difficulty swallowing. CXR showing bilateral asymmetrical airspace opacities. RT-PCR was positive for COVID-19.

Fig. 3. 83-year old patient COVID-19 patient who presented with difficulty in breathing and history of having returned from a trip abroad in January. Chest X-ray shows severe bilateral middle and lower lung zone consolidations with air bronchograms.

By Dr. Mrs. Badu Peprah and Dr. Ijeoma Anyitey-Kokor from Excerpts from training programmes including webinars by The Radiology Directorate of KATH.
COVID-19 DONATIONS

The Board, Management and Staff of Komfo Anokye Teaching Hospital are very grateful for the kind donations and support to the hospital in these difficult times. We appreciate all your efforts and wish you Ayekoo!!! We will however take this opportunity to ask all corporate bodies and individuals to support the hospital as we all fight the deadly COVID-19 virus. Our current list of donors are as follows:

2. World Bank.
3. Dr. Osei Kwame "Despite" (CEO, Despite Group of Companies) and Dr. Ernest Ofori Sarpong (CEO, Special Group of Companies): Cash of US$100,000.00.
4. Delta Agro Limited: 210 cartons (10,080 pieces) of assorted Maram liquid and antiseptic soaps.
5. The Church of Pentecost, Asokwa Area: Veronica buckets, (45 pieces), Hand sanitizers (50 gallons), Guardian carbolic (Soap 20 boxes), Tissue paper (50 pack), all valued at GHC 23,000.00
7. Lansah Chemist Limited: Face Respirators (200 pieces), examination gloves (100 packs).
8. Old Mutual: Veronica Buckets (30 pieces), Basin (35), Stand (29), trash can (34 pieces).
11. His Excellency John Dramani Mahama (Former President of Ghana): PPEs (50 pieces), boots (50 pairs).
12. Madam Akosua Frema Osei Opare (Chief of Staff, Ghana): Eku Fruit Juice (10 cartons)
13. J. Stanley–Owusu & Company Ltd, Kumasi: 3 rooms at Catering Rest House
14. Union of Professional Nurses and Midwives Group of Ghana (UPNMG): Veronica buckets (5), Examination gloves (10 packs), Hand Sanitizers (5 gallons), Liquid soaps (5 gallons), Tissue papers (10 pieces), valued at GHC 2,700.00.
15. Angel Group of Companies: Adonko hand sanitizers (500 bottles).
16. Forestry Commission: Thermal guns thermometers (20) and GHC 200,000.00 cash.
17. Sunda International Co. Ltd, Accra -Ghana: Medical soaps (30 cartons), wipes (30), 3kg Kleesoft washing powder (90 cartons), medicated cake soaps (30), valued at GHS 40,000.00.
18. Gale Health Marketing Consult Ahodwo-Kumasi: SOS ADVANCE Health supplement, drinking water (500 bottles), canned drinks (10 cartons), biscuits, packs of hand gloves and face masks.
19. Adinkrah Delight, Kumasi-Ashanti: pastries (400 packs), assorted drinks (400 cups).
20. Joefel Catering Services Limited, Kumasi: 400 packed lunch to support Frontline Staff.
21. Kwadwo Asamoah (Deputy Skipper, Ghana Black Stars): US$20,000.00 cash
22. Kems Multi–Beverage Company Ltd, Kumasi: Ethanol 96% alcohol (5 drums).
23. Unijay Fashion Ltd: locally made cloth face masks (1000 pieces).
24. World Child Cancer: PPE, Medical consumables and equipment worth GHC 50,000.00
25. Ghana Oil Company Limited (GOIL): ordered medical equipment worth GHC 150,000.00 for KATH
26. Kwadwo Nkansah Lilwin (Wizzy Empire, Kumasi): 200 cartons of assorted drinks and water to support frontline staff.
27. Lebanese community in Kumasi: Assorted food items (100 boxes).
28. Methodist Hospital, Ankaase: N95 particulate respirator -face masks. (160 pieces).
30. Owner Services: 50% discount on use of canopies and chairs.
32. Dr. Paa Kwesi Baidoo (Trauma and Orthopaedic Surgeon, KATH, Chairman of Ashanti Region GMA): N95 respirator face masks.
33. Isabella Healthcare Services: Disposable bed sheets.
34. Mr Kofi Osei Amponsa, GRA Kwadaso: Examination gloves, Alcohol sanitizers.
35. ATC Ghana: N95 face mask (300), Overall (70 pieces), face shield (30), Disposable gloves (30), disposable bedsheets (30), Hand sanitizers and chlorinate disinfectant.
36. Smile Train, West and Central Africa.
37. DBS Industries Limited: cash of GHC100,000.00
COVID-19 RESPONSE LABORATORY AT KATH

The Laboratory Services Directorate (LSD) has set up a special COVID-19 laboratory at KATH and this laboratory has been operational since March 2020. It is in collaboration with the Transfusion Medicine Unit (TMU) of KATH. The KATH COVID-19 Response Lab has a class II biosafety cabinet, chemistry analyzer, haematology analyzer and bactec equipment for cultures. It handles samples from patients who are suspected or confirmed to have COVID-19 and it ensures that samples with potentially highly infectious SARS-CoV-2 are not handled in the general laboratories and it also provides transusion services. The COVID-19 laboratory provides 24/7 services since it became operational on 26th March, 2020.

The design of the KATH COVID-19 Response Lab makes it also suited for handling of COVID-19 testing. The Kumasi Center for Collaborative Research (KCCR) and KATH have therefore established partnership for which KATH LSD process samples before the samples are transported to the KCCR for further analysis at their laboratory. This has increased the speed at which KCCR turn out results of patients with suspicion of COVID-19. A total of 1,048 samples had so far been processed at the COVID-19 response laboratory for KCCR as at the end of April 2020. A PCR machine, provided by the TMU, is currently undergoing calibration and validation by KCCR. The calibration and validation is expected to be completed by the second week of May 2020 and this will enable the KATH COVID-19 Response Laboratory to start providing COVID-19 testing services.

The KATH COVID-19 Response Lab has a team of seven members from the LSD with a supervisor who is a Principal Medical Laboratory Scientist. The other members are Medical Scientists and Technical Officers. The TMU team also consist of five members headed by a Chief Medical Laboratory Scientist. A Total of 120 samples have been analysed in the laboratory from 112 patients (both suspected and confirmed COVID-19).

The KATH COVID-19 Response Laboratory is serving the purpose for which it was established. It will soon be a testing centre which will contribute to easing the workload on the existing testing centres. This will improve significantly the turnaround time for test results for COVID-19 and therefore help improve case management within KATH, the Ashanti region and Ghana in general.

KATH NEWS COVID-19 SPECIAL EDITION - MAY 2020

WHO, GHS, MOH ASSESS KATH COVID-19 PREPAREDNESS

The Hospital was privileged to have had assessment of its preparedness by Dr. Kwame Amponsah-Achiano- Programme Manager EPI, GHS and Team Lead, Dr. Dennis Laryea - National Coordinator for Port Health, GHS, Mr Godfrey Owusu-Sekyere - National Public Health and Reference Laboratory, GHS, Dr. Sally-Ann Ohene-Ghana Country Office, WHO

Key findings on visit to Komfo Anokye Teaching Hospital

- KATH working closely with the Regional Health Directorate of the GHS in the COVID-19 response with the direct involvement of the CEO and the Public Health Units

Surveillance

- Case definition for COVID-19 being applied in KATH
- Public Health Unit Staff have been involved in the sensitization of the various directorates of the hospital on COVID-19

Laboratory

- KATH has an established system to transport samples from the hospital to the designated laboratory for COVID-19 testing at KCCR
- Availability of sample collection kits adequate

Case Management

- KATH has established treatment centres at the A&E department (located at the Disaster Block) and the Family Medicine Ward
- Well established teams of clinicians and support staff running 12-hour shifts with a back-up team to ensure staffing adequacy in case of cases among treatment centre staff

Challenges

- Availability of PPE: KATH with the large staff and patient numbers comes with an attendant high demand for PPE. Stocks run out fast and there is the need for a regular supply of PPE to KATH
- Security at the isolation centre
- Consumables at the isolation centre
- Increasing hospital expenditure amidst declining revenue as a result of COVID-19

Recommendations

- The Ministry of Health must prioritise institutions as KATH with the provision of PPE to ensure staff are protected to perform their duties effectively
- The hospital should be supported to fund the provision of security services for the hospital.
- National security agencies can be made to support provision of security services for the hospital.
- Consumables for service delivery in the treatment centres should be provided on a regular basis
- Financial support to KATH

Story by Dr. Dennis Laryea - National Coordinator for Port Health, GHS.

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