

INCLUSION OF MEMBERS FROM THE IICFIP ON TASK FORCES TO COMPLETE CONTACT TRACING FOR COVID-19: A WHITE PAPER TO THE AFRICAN UNION

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SUMMARY

COVID-19 made a sudden appearance in the world from the early days of 2020. The novel coronavirus proved to be robust and spread across countries and continents within weeks, causing thousands of infections and high mortality rates. The rapid spread and mortality rates led to COVID-19 being announced as a pandemic by the WHO. This was followed by drastic measures to prevent its progress as countries shut their regional and national boarders to travelers and declared national shutdown of all activities with only essential services being allowed to operate. In flattening the virus spreading curve lockdown was reasonably successful. The other avenue of disease management is contact tracing which is employed to prevent further spreading of the virus by identifying, locating, educating, and monitoring individuals who were in contact with a COVID-19 patient and stand the chance of becoming infected. With a pandemic, contact tracing stretches far beyond the borders of single countries and involve large geographical regions such as Africa.



















The African Union (AU) has the task to plan and execute COVID-19 contact tracing in Africa.

The International Institute for Certified Forensic Investigation Professionals (IICFIP) is the premier global forensic organization, with a large membership in 170+ countries and global network of forensic investigators well-equipped and positioned to play a significant role in the contact tracing task of African Nations, Sub-Regional and Regional Organizations including the **AU**.

Against the **BACKGROUND** of the rapid spreading COVID-19 pandemic that led to near-global lockdown with its devastating economic implications, the member countries of the African Union are faced with responsible reopening of society. Whereas no single force or situation can dictate all social action and responses the two prominent drivers in the current COVID-19 situation (i) health and (ii) economy must be considered when deciding to re-open society structures and economic activities. While the aim of the lockdown situation was to "flatten the curve" of infections and simultaneously bring about a higher state of readiness within the medical system to deal with the COVID-19 outbreak and save lives, the secondary result thereof is economic devastation and unprecedented rates of bankruptcy and unemployment. Re-opening of societal and economic structures should be done in a manner that benefits the economy without endangering the health of society. To this end, contact tracing, a common measure in the management and prevention of infectious diseases, should be stepped up and conducted in an efficient and well-structured manner. Previous endeavors with infectious diseases such as Severe Acute Respiratory Syndrome (SARS), Middle East Respiratory Syndrome (MERS),



















and Ebola virus disease (EVD) can be used to learn from. However, the unique characteristics of COVID-19 in terms of its transmission and incubation together with the transmission from asymptomatic cases must be considered when developing a system of contact tracing.

COVID-19

Shortly after the New Year celebrations with its planning for the year ahead, the world woke up to the reporting of a novel coronavirus by the Chinese CDC on 9 January, 2020 (ECDC, 2020a). The new virus SARS-CoV-2, later known as COVID-19, was linked to pneumonia cases entering the medical system in Wuhan, China. There were indications of reported illnesses of this disease in 2019, which is the reason for allocating '19' to its official name. A mere month later COVID-19 was diagnosed in patients in Europe and other parts of the globe. This led to the decision of the Director-General of World Health Organization (WHO) to declare the outbreak of COVID-19 a pandemic. Most countries in the European Union (EU) / European Economic Area (EEA) saw confirmed cases of COVID-19 that elicited an immediate reaction to safe-guard citizens (ECDC, 2020a).

Symptoms of COVID-19 infection that need to be recognized by all for swift response include fever, fatigue, and dry cough. However, the symptoms may only manifest between 1-14 days after being infected while transmission of the disease by an infected person can commence 48 hours after infection (ECDC, 2020). It is therefore possible that a person has not yet displayed symptoms (pre-symptomatic) of infection but may be transmitting COVID-19 to everyone they are in contact with. Infected persons remain infectious for up to 14 days after becoming infected (Beeching, Fletcher, & Beadsworth, 2020).



















Typically, the concentration of the virus is high during the initial onset of the disease that significantly increases the transmission risk (ECDC, 2020b). The main avenue of transmission is in-person face-to-face contact by means of respiratory droplets of the infected person which are inhaled by the recipient. Alternatively, transmission can manifest upon touching the facial area after being in touch contact with contaminated surfaces. Viruses on surfaces can remain viable for more than one day (ECDC, 2020b). Although the transmission risk from asymptomatic individuals is less, it is still possible to contract the disease from them (ECDC, 2020a).

In response to the spread of COVID-19 that included not only people falling ill but also a significant number of people dying, countries have decided to flatten the curve by instructing people to remain home. The argument was that less contact between people would give less opportunity to transmit the virus thus decreasing infections. During this time of lockdown, countries' medical facilities had the opportunity to prepare themselves in managing patients and develop treatment protocols. This tactic worked as the number of new infections had decreased leaving countries with another obstacle of how to re-open the country without endangering its people by increasing the transmission risk.

Contact Tracing

In addition to lockdowns countries have embarked on contact tracing which is a well-known activity within preventative medicine. According to the medical director of occupational health services of the Mayo Clinic—Dr. Breeher—contact tracing is basic to preventative medicine (De la Garza, 2020). The aim of contact tracing is to identify and find individuals who were in recent contact with an established case of COVID-19 to isolate and monitor them with the aim of limiting transmission through isolation or



















quarantine and providing treatment in good time. Dr. Breeher indicated that contact tracing was successfully used with the SARS outbreak of 2003 and the Ebola virus outbreak of 2014 (De la Garza, 2020). South Korea and New Zeeland led the pack with contact tracing with the global spread of COVID-19 in their aim to control outbreaks.

The following three activities form part of contact tracing: Contact identification, listing, and follow-up (WHO, 2017). Contact identification starts immediately after a patient is identified as having contracted COVID-19 through laboratory testing. Possible contacts are identified through an interview with the patient regarding their most recent activities and people they have been in contact with. In the case of COVID-19 contact is regarded as someone who was within 6 feet (2 meters) from the patient and the contact should last for 10 minutes in the outside world and 5 minutes in a healthcare setting (Dr Breeher as cited by De la Garza, 2020). According to the WHO (2017) this could be anyone not only family members, friends, coworkers, and healthcare providers but also co-travelers or those sharing long queues at shopping malls. The aim of contact listing is to identify and contact every listed person to inform them of their contact status, provide specific information regarding arrangements for contacts and receiving early care should they develop symptoms (De la Garza, 2020). Regular follow-up of contacts is done via the contact follow-up program as the symptoms of all contacts must be recorded for early detection of infection. According to the National Center for Immunization and Respiratory Diseases (NCIRD, 2020), people who do contact tracing need specific training as they should work with tact and communicate effectively with contacts to encourage them to follow the suggestions, while not exposing the status of the patient they were in contact with.



















The ECDC (2020) reported that they are training volunteers to assist with this high-intensity task of contact tracing.

Learning from Ebola virus disease (EVD) in 2014. The most recent outbreak of an infectious disease is the 2014-2015 EVD outbreak in Liberia. Between June 4, 2014 and July 13, 2015 Liberia had recorded contract tracing results of 25,830 possible cases which represents 26.7% of the total EVD cases that were monitored (Swanson et al., 2018). Of the monitored cases 1.4% cases were identified as potential cases that had to be monitored daily for symptoms. Cases had a wide distribution between urban and rural areas that made listing and monitoring of cases difficult. The Liberian EVD contact tracing was an essential part of fighting the spread of infections and was the largest scale of its kind done at that stage. Swanson et al. recommended that contact tracing could be improved by using an integrated surveillance system, spreading out the management of the multidisciplinary teams, developing comprehensive procedures, and employing strategies developed with the community.

In the current situation of COVID-19, the outbreak is not localized in a small region or country as it is a pandemic. When considering the Africa region, one is struck with the sheer size of Africa, its varied territories and boarders, different cultures, and transportation or movement patterns. The variation in infrastructure and communication systems further outlines the possibilities for complications in contact tracing.

In sum, the following are characteristics of contact tracing (i) regular infectious disease measure, (ii) essential in preventing further spread of infectious diseases like EVD, SARS, HIV/AIDS and COVID-19, (iii) must commence immediately after diagnosing patient



















(iv) in-person contact with patient to recall activities and people met [contact identification] —unfortunately a fallible process due to lapses in memory of patients, (v) contact listing represents hours of searching to get contact details, locate, and address the contact, (vi) contact monitoring daily monitoring of contacts requires many man hours to complete symptom data for early diagnosis, (vii) although specialized, volunteers can be trained to assist with the task of contact tracing. Something the researchers and organizations did not fully address is the need for coordination of activities and developing innovative methods of contact tracing suitable for the specific geographic region, population, and existing infrastructure with available communication networks.

Certified Forensic Investigation Professionals (CFIP)

"A forensic investigation is the practice of lawfully establishing evidence and facts that are to be presented in a court of law. The term is used for nearly all investigations, ranging from cases of financial fraud to murder" (Justicia Investigations, 2020, website). From this definition it is evident that forensic investigators should have high levels of work ethics that can hold in a court of law. The definition also allures to the fact that there are different focus or specialization areas in forensic investigation and that it should systematically work towards finding evidence. One of the branches of forensic investigation is medical forensics.

Forensics has different branches, also within medicine. Medical forensics has as its focus the determination of the cause of death with a view of determining the possibility of foul play. This branch of medicine with its links in forensics plays an important part in society. This is, however, not essentially linked with contact tracing. Timmermans (2008) asserted that the expert opinion of a forensic medical practitioner who takes a case after



















it was referred by the medical examiner has legal status which is seldom questioned by other forensic experts. The role of forensic medicine is professional fact-finding and verification with communicating findings by providing a report and testifying in court should it be needed.

Forensic investigations must often locate stakeholders who are not necessarily eager to be found or not fully known to the investigators, e.g. fraud cases. In the case of civil investigations undertaken by forensic investigators absconded persons are traced using various techniques in investigating and finding the person(s). The International Institute of Certified Forensic Investigation Professionals USA, Inc. (IICFIP), is an accredited training organization that also conducts forensic investigations and manages a database of its graduates and a global network of forensic investigators and affiliated services. The vision of the IICFIP is to be "the leading forensic investigation accreditation training and standards setting body institute in the World" (IICFIP, 2020, website).

Besides the usual branches of forensic investigation, the IICFIP provides training on computer and digital forensics. This branch of forensic investigation is of importance in the COVID-19 contact tracing and several countries, such as Israel, wrote software and implemented digital methods to do contact tracing to prevent transmission of the virus. In contrast, computer and digital forensics already has and implements digital tracing with great success. Actoriano and Riadi (2018) reported on the use of WhatsApp messages via WhatsApp Web. The use of WhatsApp is widespread among smartphone owners. Accessing WhatsApp databases, laptop, and Smartphone directories in conducting a forensic investigation to obtain evidence and data is made possible with this investigative technique. Using WhatsApp technology is a cost-effective investigation



















option as it does not cost more than only the Internet subscription already

paid by organizations. Mobile forensics have developed since the common use of portable devices such as cell phones and laptops. Existing technologies such as Integrated Digital Forensic Investigation Framework Version 2 together with WhatsApp Viewer together with WhatsApp Web and WhatsApp enabled smartphones as described by Actoriano and Riadi (2018), can be used to retrieve message content and the number of the person being investigated. In the case of COVID-19 the search is not for a perpetrator but tracing possible contacts, forensic investigators have both experience in tracing and finding people and evidence and sophisticated technologies that support them in their searches. The inclusion of forensic investigators in contact tracing is therefore advisable as it could save time and money, while obtaining expert skills and knowledge.

What Expertise can Forensic Investigators Provide in Contact Tracing?

a. Manpower and time:

As alluded earlier, contact tracing requires immediate action as time is of the essence when identifying, listing, finding, and monitoring possible contacts. Using medical personnel to perform these intensive and time-consuming tasks may not be indicated in the COVID-19 scenario where healthcare staffs are already overworked due to the sheer size of the medical care demand. Even though contact tracing was described as highly specialized, countries make use of volunteers consisting of students or retired individuals who receive training from trained contact tracing staff. It follows then that, with training, volunteers could take over the task of contract tracing and free medical staff for their expert role in providing care to patients. Whereas forensic investigators may not be available to

















perform the actual contact tracing as volunteers, they could benefit the system by performing other functions.

b. Management and quality control:

Explorations of contact tracing did not include much discussion on the management of manpower and quality control measures needed to ensure success. The review of EVD contact tracing recommended using smaller, regional teams of contact tracers. Without doubt teams will have to be managed and support in terms of training, data capturing and developing area-specific solutions may be needed from time-to-time. Forensic investigators are highly skilled individuals in tracing evidence, including people, and work in teams that necessitates managerial skills. Forensic investigators are therefore well-positioned to support train contact tracing volunteers in their task. Tracing COVID-19 contacts in Africa, which is the jurisdiction of the African Union, the vastness of the area, different countries, cultures, and regions are evident. An essential function is planning and coordinating contact tracing efforts within countries and across the larger region. Forensic investigators often have to work across regional and country boarders resulting in a network of peers and allied workers, all of which could be utilized in COVID-19 contact tracing.

In addition, due to the high level of expertise and work quality needed when presenting evidence at a court of law, forensic investigators are out of necessity trained in ensuring quality control—a function that is needed in the monitoring of possible cases. Contact follow-up is vital in preventing further spread of the virus. Volunteers may not be thoroughly aware of the essence of this extremely time intensive and repetitive task.



















A quality control function is needed in ensuring collecting data of high quality. Forensic investigators are ideally equipped in providing quality control of data collection.

Recommendations

- Include forensic investigators of the IICFIP on the AU COVID-19 1. contact tracing team will benefit contact tracing in different ways.
- 2. Forensic investigators of the IICFIP possess expertise in tracing and finding evidence as well as innovative techniques that can benefit COVID-19 contact tracing.
- 3. IICFIP has a large network of registered forensic investigators and allied workers worldwide to benefit COVID-19 contact tracing.
- 4. IICFIP members have extensive experience in planning, tracing and monitoring operations that can benefit COVID-19 contact tracing.
- 5. IICFIP members have expert skills in ensuring quality control and problem solving that can be used in the three steps of contact control.
- 6. IICFIP members serving in planning and managing operations, listing and follow-up phases of contact control will save precious time of healthcare staff that could be put to better use in patient treatment.



















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