



Ministry of Health

Overview of CORONAVIRUS DISEASE 2019 (COVID-19)

Learning objectives:

By the end of this module the learner will be able to:

- Describe recent outbreaks of emerging respiratory viruses
- Comprehend the current global, regional and local situational analysis of the novel coronavirus COVID-19 outbreak
- Understand the risk factors for an outbreak of COVID-19 in Kenya

Emerging respiratory viruses

- Viruses continue to emerge and pose challenges to public health
- Some examples of emerging respiratory viruses include:
 - 2002: Severe Acute Respiratory Syndrome coronavirus (SARSCoV)
 - 2009: H1N1 influenza
 - 2012: Middle East Respiratory Syndrome coronavirus (MERSCoV)
 - 2019: Novel coronavirus (COVID-19)

How do new viruses emerge?

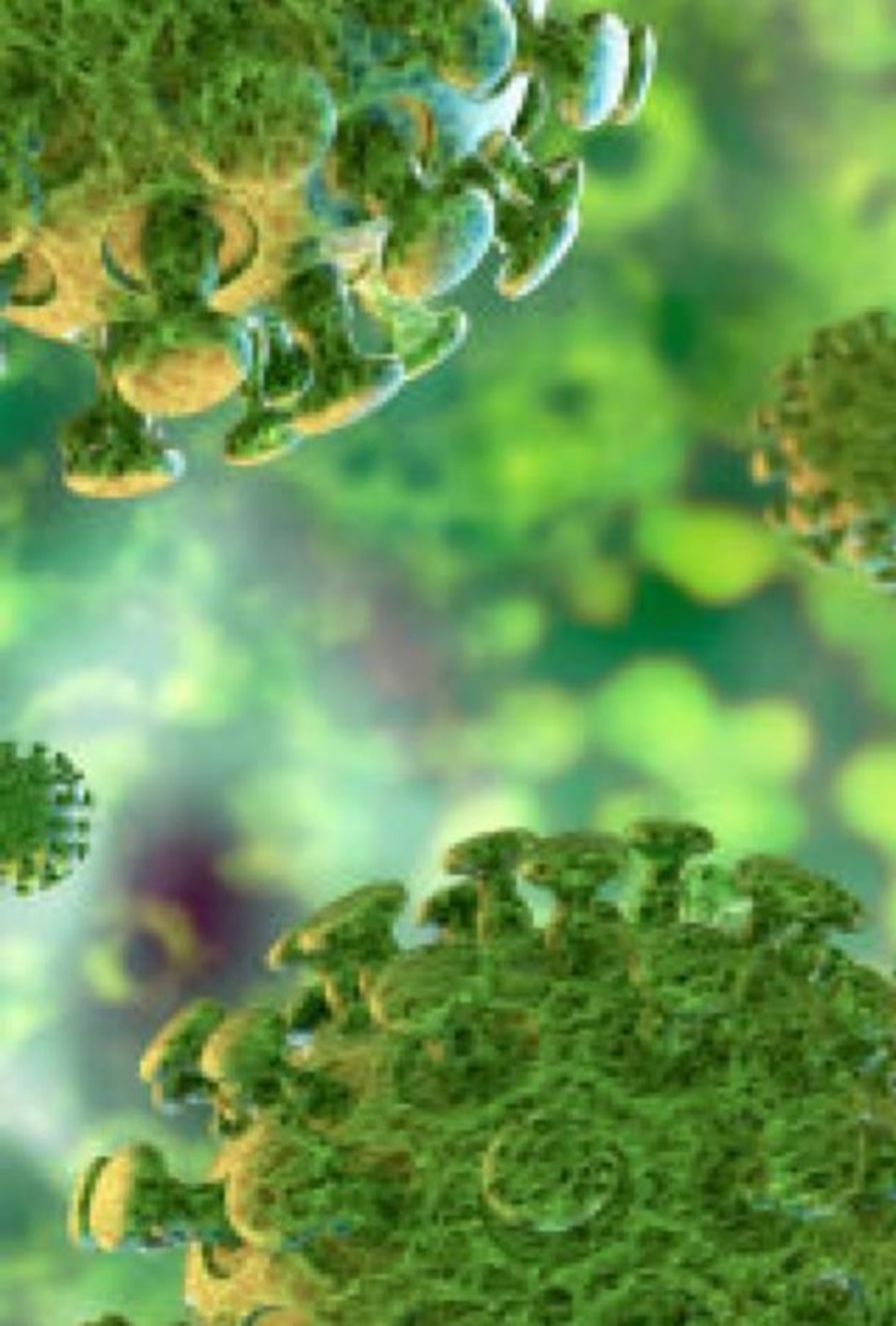
- Human health, animal health and the state of ecosystems are inextricably linked
- 70-80% of emerging and re-emerging infectious diseases are known to be of zoonotic origin (animals and human transmission)
- Population growth, climate change, increasing urbanization, and international travel and migration all increase the risk for emergence and spread of respiratory pathogens



Avian Flu



MERS CoV



Introduction: What is coronavirus?

- Coronaviruses are a large family of viruses that are known to cause illness ranging from the common cold to more severe diseases such as Middle East Respiratory Syndrome (MERS) and Severe Acute Respiratory Syndrome (SARS)
- In humans they can cause mild disease similar to a common cold – others cause more severe disease (such as MERS and SARS)
- Some coronaviruses that are found in animals can infect humans (zoonotic diseases)

Introduction: What is a coronavirus?

- A novel, or new, coronavirus is called nCoV
- How are coronaviruses spread?
 - Droplets (coughing) and close personal unprotected contact with an infected person (touching, shaking hands)
- What are the symptoms?
 - Signs and symptoms are typically respiratory symptoms and include: fever, cough, shortness of breath, and other cold-like symptoms
 - Incubation period: 2 days to 14 days

Where do coronaviruses come from?

- Coronaviruses also cause disease in a wide variety of animal species
- SARS-CoV was transmitted from civet cats to humans in China in 2002 and MERS-CoV from dromedary camels to humans in Saudi Arabia in 2012
- Several known coronaviruses are circulating in animals that have not yet infected humans
- A **spillover event** is when a virus that is circulating in an animal species is found to have been transmitted to human(s)

People at risk for infection from coronaviruses

- People in close contact with animals (e.g. live animal market workers)
- Family members or health care workers who are caring for a person infected by a new coronavirus



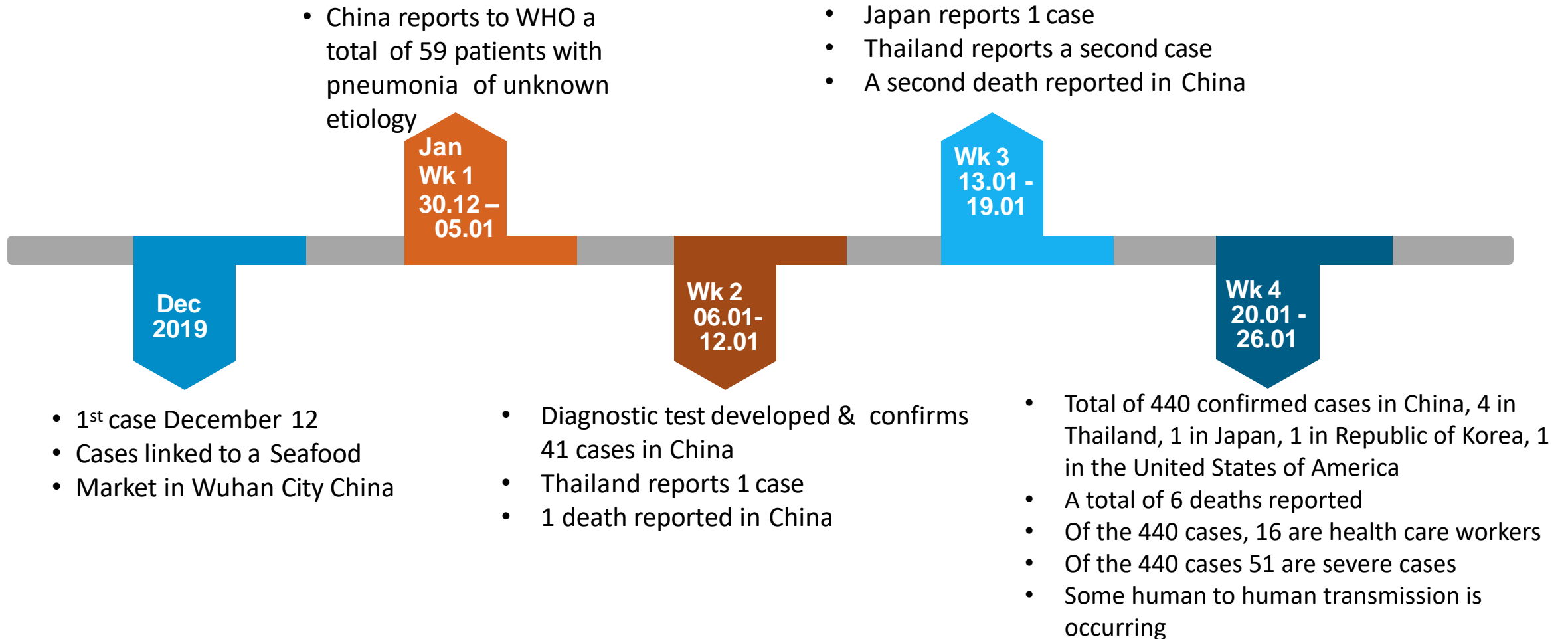
What is COVID-19?

- Novel coronavirus that emerged in 2019 in Wuhan China
- Little is known about the virus
- Human to human spread is:
 - By droplet transmission (main mode of transmission)
 - Possibly +/- touching a surface or object that has the virus on it and then touching the mouth, nose, or eyes
- Most infections are mild
 - Approx. 15-20% of infected will have severe disease
- Mortality rate: 2% (WHO estimate – may change)
 - Mortality among hospitalized patients in China: 15%

Clinical management of COVID-19

- Limited information is available to characterize the spectrum of clinical illness associated with COVID-19
- No vaccine or specific treatment for COVID-19 is available
- **Care is supportive**

COVID 2019 - Timeline of the outbreak



COVID-19 OUTBREAK

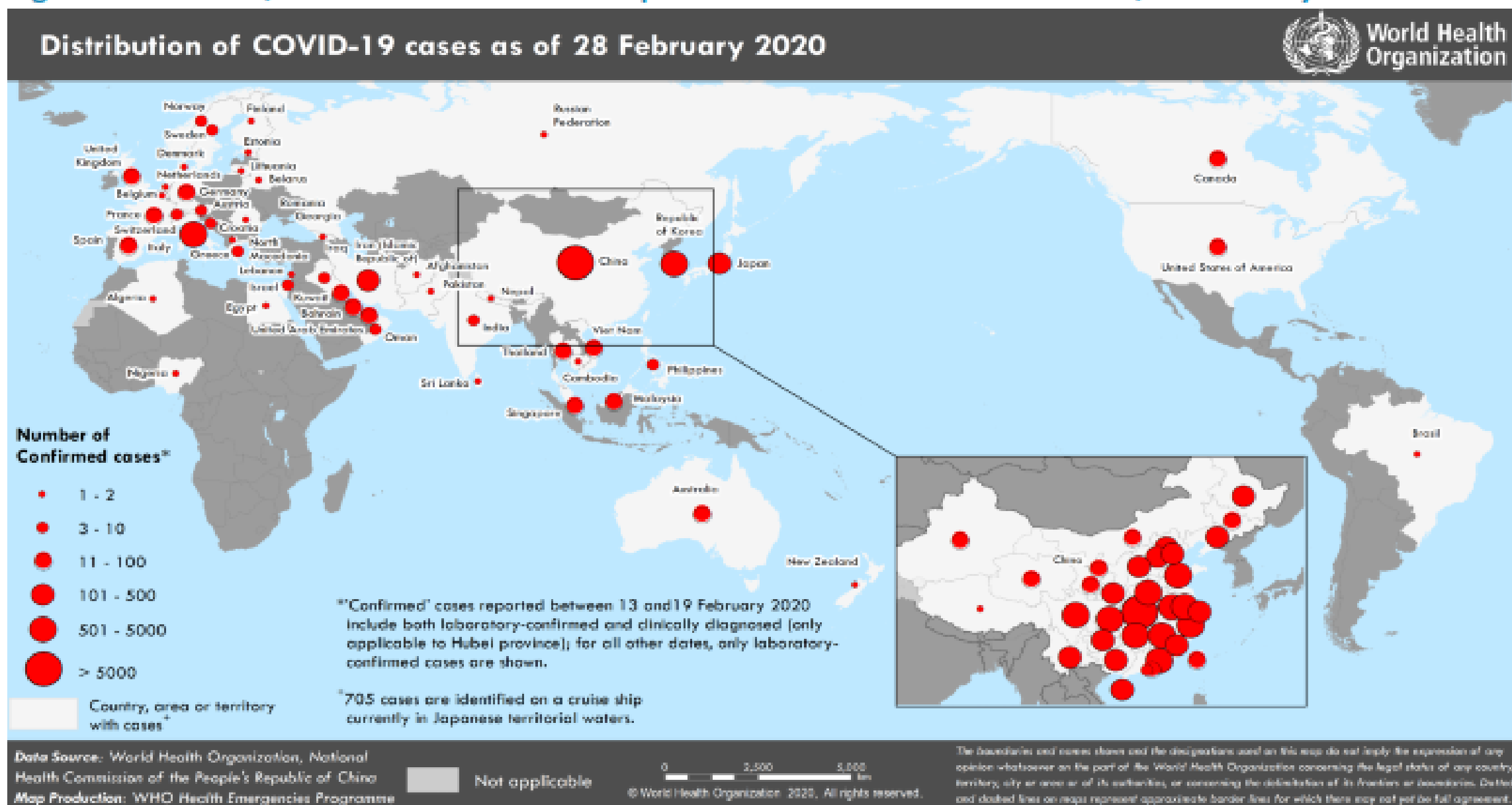
- On 30th January, 2020 the WHO Director-General declared that the ongoing outbreak of COVID-19 constitutes a public health emergency of international concern (PHEIC)
- The WHO [defines a PHEIC](#) as an “extraordinary event” that “constitute[s] a public health risk to other States through the international spread of disease” and “potentially require[s] a coordinated international response.”

Novel Coronavirus COVID19 Outbreak

Situation in Numbers *as at 16 March 2020*

- **Globally**
 - 167 414 confirmed (1358 new)
 - 6507 deaths
- **China**
 - 81020 confirmed
 - 3226 deaths
- **Kenya**
 - **Kenya 4 cases**
 - No deaths
 - No local transmission established
- **WHO updates can be found at this website**
- <https://www.who.int/emergencies/diseases/novel-coronavirus-2019/situation-reports>

Figure 1. Countries, territories or areas with reported confirmed cases of COVID-19, 28 February 2020



Situation in Kenya

Current Situation in Kenya(as at 17.03.2020)

- There have been 4 cases confirmed
- No deaths
- No local transmission established
- Aggressive contact tracing in place
- Training of TOTs from all county currently on
- Training has been cascaded down downwards to frontline staffs in the 14 high risk counties(Nairobi, Mombasa, Kisumu, Kiambu, Uasin Gishu, Kajiado, Machakos, Nakuru, Garissa, Wajir, Busia, Kilifi, Kakamega and Migori)
- Trainings on sample collection on gong at NHPLs

Risk Factors for Novel Corona Virus Disease Outbreak in Kenya

- There is brisk trade and business between Kenya & China and Kenya other COVID-19 affected countries which involves movement of humans and goods
 - At least 75,000 passengers from China pass through JKIA annually.
- Large Chinese community settled in several parts of the country & they receive visitors from China and a large Kenyan Community in China including students
- Socio-cultural practices including handshaking and poor health seeking behavior

Risk Factors for Novel Corona Virus Disease Outbreak in Kenya

- Mombasa has one of the largest sea ports in East Africa where goods and humans pass through daily
- Fourteen 14 counties are considered to be at high risk.
 - These counties are either counties with international airports, sea ports or have major land border crossing or have a high Chinese population

Country Preparedness Measures

Kenya has been identified by WHO as a priority one country for preparedness for the COVID-19 as the situation is rapidly evolving

- Governance: Adoption of a whole government and multi-agency approach, at two levels (policy and technical). Ministries, departments and agencies have been brought on board to deal with the threat of COVID-19
 - National Emergency Response Committee on Coronavirus
 - National Task Force
- Activation of Emergency Operations Centre: Is closely monitoring the evolution of the outbreak across the world
 - Rapid response teams are on standby to investigate any alert in – country
- Kenya has capacity to test at National Influenza Centre at NPHLs

Country Preparedness Measures



**NATIONAL 2019 NOVEL CORONAVIRUS
CONTINGENCY (READINESS AND EARLY
RESPONSE) PLAN
FEBRUARY-APRIL 2020**



JANUARY 2020

- Developed a National COVID-19 Contingency plan
- Indicator and Event based surveillance is ongoing
- Four cases confirmed case in Kenya
- No local transmission

Country Preparedness Measures

- Points of Entry (POEs)
 - Directive to screen all travelers entering Kenya for COVID-19
 - Each POE should have a designated health facility where suspected cases are referred for specimen collection
 - Use of multilayered screening approach at POE
- Training and sensitization: Ongoing for health workers in both public and private health facilities and at POEs
- Isolation Facilities: Kenyatta National Hospital continues to be used to isolate suspected cases while they undergo investigation.
 - Renovation and operationalization of 120 beds at Mbagathi District Hospital to increase isolation capacity
 - Directive for all counties to identify and prepare isolation units
- Personal Protective Equipment: The country has personal protective equipment (PPE) sets and more are being mobilized.

Thank you