

Health And Radiation Amidst Covid-19 Pandemic

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Outline

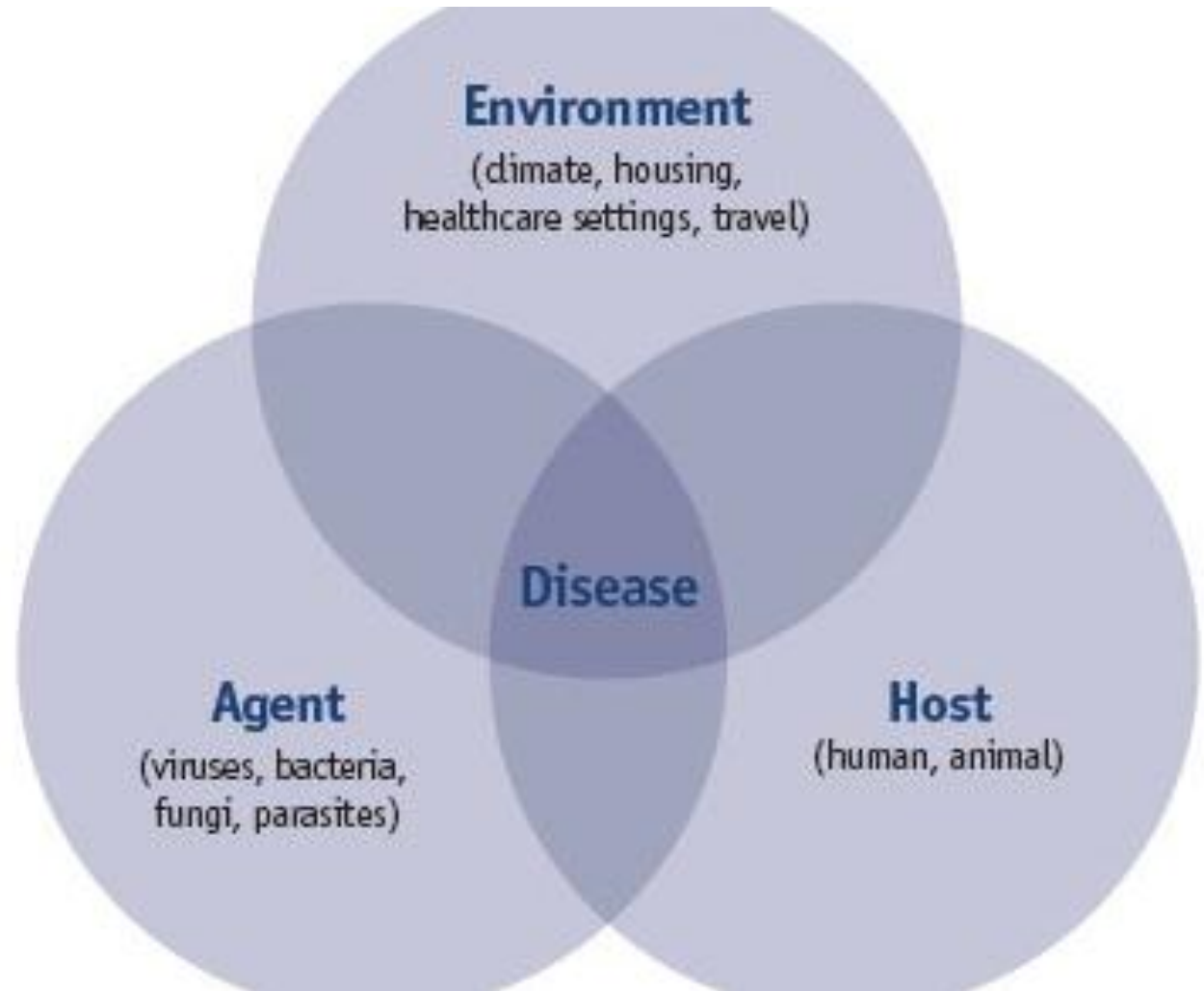
- Health- Definition and dimensions
- Radiation- Definition and Types
- Medical Effects of radiation
- 5G Radiation
- What is COVID-19?
- Symptoms of COVID-19
- Prevention of COVID-19 infection

HEALTH

- Health is a state of complete physical, mental and social well-being and not merely an absence of disease or infirmity.
- Also implies the ability to lead a "socially and economically productive life.
- Dimensions of health include *physical, mental, social, spiritual, emotional, vocational, political dimensions(philosophical dimension), cultural dimension, socio-economic dimension, environmental, educational dimension, nutritional dimension, curative dimension, and preventive dimension*. The list continues to grow as knowledge base increases.

Epidemiologic Triad

- traditional model of disease causation especially for infectious disease
- Agent, host, and environmental factors interact in a variety of intricate ways cause diseases .
- **Agent** originally referred to an infectious microorganism or pathogen. chemical and physical causes of disease or injury.
- **Host** refers to the human who can get the disease.
- **Environment** refers to extrinsic factors that affect the agent and the opportunity for exposure e.g. **geology** and **climate**, **insects**, **crowding**, **sanitation**, and the **availability of health services**, **Radiation**.



RADIATION

- Radiation is defined as energy that travels as a wave or particle.
- Types of radiation: 2 types
 - Ionizing radiation: Ionizing radiation occurs when EMF signals carry enough energy to break molecular bonds and consequently damage the DNA, e.g. medical X-ray, CT scan
 - Non-ionizing radiation: non-ionizing radiations do not have sufficient energy to break molecular bonds e.g. 2G, 3G, 4G and 5G? Most common man-made sources of non-ionized radiations are electricity, telecommunications, radio and TV broadcasting antennas, etc.

Effects of Ionizing radiation on Health

- At high enough doses, ionizing radiation can damage molecules such as DNA in cells.
- Damage to DNA and other important cellular components can result in cell damage or cell death.
- This can lead to health effects like an increase in cancer risk and, at extremely high doses, death.

Use of Ionizing radiation

- At the same time, ionizing radiation has many practical applications such as in medical imaging using x-rays and CT scans including total body scan
- It is used in radiation therapy to treat tumors and leukemia.
- It is used to sterilize many products including some types of food, and it is used in many common items such as smoke detector sensors..

5G Radiation and Health Effect

- 5G is a fifth generation mobile technology, which is an improvement on 4G technology with enhanced capabilities such as higher speed of internet connectivity.
- 5G technology provides the platform for new and emerging technologies such as Internet of Things (IoT), Artificial Intelligence (AI) and big data to improve the way people live and work.
- No scientific studies to show that electromagnetic emissions from telecoms facilities, including mobile phones, could cause health hazard to humans.

5G Radiation and Health Effect

- A trial test of 5G approved by NCC in Nov.2019 for a period of three months has been concluded and installation decommissioned.
- The trial, among others, studied and observe any health or security challenges the 5G network might present in Nigeria.
- There is no deployment of 5G in Nigeria at the moment.
- There is no iota of truth that 5G technology is the cause of the COVID-19 pandemic . The virus is also spreading in places without 5G networks like Nigeria and many parts of the world that do not have 5G coverage yet.

What is COVID-19

- Coronavirus disease 2019 (COVID-19) is a respiratory illness caused by a novel coronavirus named SARCoV-2 which is a new strain of a large family of viruses called coronaviruses that can spread from person to person
- **Incubation Period-** 1-14 days up to 24 days
- Case fatality rate-3.2%
- **Transmission :**
 - Direct transmission : Inhaling respiratory droplets produced when an infected person coughs or sneezes.
 - Indirect transmission: By touching a surface or object that has the virus on it and then touching mouth, nose, or eyes.

Symptoms

- Fever (44%–98%)
- Cough (46–82%, usually dry)
- Shortness of breath at onset (31%)
- Body ache or fatigue (11–44%)
- Loss of taste or smell

Less common symptoms:

- Pharyngitis(Sorethroat)
- Headache
- Productive cough
- GI symptoms e.g diarrhea
- Hemoptysis (Coughing of blood)

General Prevention for Everyone

- **Wash your hands** frequently with soap under running water for 20 seconds OR
- Alcohol-based sanitizer if water is not available
- **Wear Cloth Face Mask**
- Avoid touching your eyes, nose and mouth with unwashed hands
- **Social (Physical) Distancing:**
 - Stay at least 6 feet (2 meters) from other people
 - Do not gather in groups
 - Stay out of crowded places and avoid mass gatherings
- **Cover mouth and nose** with a tissue paper when sneezing and coughing (dispose tissue properly and immediately). Cough into elbow if tissue not available
- **Obey national and state directives** on cancelling/avoiding large gatherings, staying at home in lockdowns, social distancing and self-isolation
- **Seek immediate medical help** if unwell with fever, cough, sneezing or difficulty breathing
- **Clean all touched surfaces** like doorknobs, phones, and tables, with soap and water, diluted bleach & other disinfectant (least 70% alcohol) regularly

Thank you