



# NIGHTINGALE PUBLICATIONS AND RESEARCH INTERNATIONAL

## THE ROLE OF TOWN PLANNERS IN ADDRESSING THE CHALLENGES OF PANDEMICS – A FOCUS ON COVID- 19

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### Introduction

Wikipedia (2020) defines a pandemic as a disease epidemic that spread across a large region, for instance multiple continents, or worldwide. Throughout history, there have been a number of pandemics of diseases. One of the most devastating pandemics was the Black Death (also known as The Plague), which killed an estimated 75–200 million people in the 14th century. Other notable pandemics include the 1918 influenza pandemic (Spanish flu) and the 2009 flu pandemic (H1N1). In the 20<sup>th</sup> to 21<sup>st</sup> centuries HIV/AIDS was the most cyclical and the 2019 coronavirus disease, which was declared a pandemic on 11 March 2020 by the World Health Organization (WHO) (Wikipedia, 2020) became the global catchword.

The year 2020 will forever remain indelible in history given the scourge and impacts of COVID-19 pandemic in almost all ramifications of global communal existence within a relatively short time. As the disease ravaged the world, it ensures tension, fear,

### Abstract

*Pandemics are disease epidemic that has spread across a large region and is affecting a large number of people in different regions and cause a lot of pains and psychological trauma. In solving this, town planner's roles cannot be undermined. Thus, this paper underlines the role of town planners in solving pandemic with specific focus on the COVID-19. It adopted the use of secondary data source by reviewing past literatures on the subject matter. Findings shows that pandemics are spread through various factors, among them is through high density in overcrowded places, fear and stigmatization. It showed that planners can help curb the spread of pandemics through smart planning, population spread control measures,*

*focus on access to core services, planning for affordable housing and public spaces, increased environmental sustainability awareness among others. It is therefore recommended that to make planners work effectively, government and other agencies should pay attention to the advice of the town planners in their decision making process, adequate tools and machinery be given to planners to effectively carry out strict and objective development control measures in city planning and development, they can be aided to carryout campaigns and other information services to inform people on the need to take precautions and take necessary measures to improve their environment through advocacy planning. The necessary police force should be accorded planning policies to ensure strict compliance to ensure that there is orderliness in the towns and cities and population control should be adhered to in order to ensure the adequate population for every planned facility.*

**Keywords:** *Pandemic, COVID-19, Role, Town Planners*

Restrictions, prescriptions and concerns from all spectra of human endeavor to tackle the spread and impacts of the disease. Various nations, institutions organizations and professions joined to outlined rules and strategies in curbing the spread of the Covid-19 pandemic.

Throughout the history of plagues or pandemics, those in the medical sector have always come up with various researches on how to curb these pandemics, though on the part of the planners little or nothing has been done to highlight their functions. Though, town planning is a multi-faced discipline which encompasses a lot, but in the fight against pandemics, there is more the planner can perform. However, the roles of the Town Planners as the architect of space and settlements where the plague impacts, is critical and yet to be clearly defined. It thus, becomes imperative to articulate the role of the Town Planners in planning and management of settlements to solving occurrences and management of plagues, epidemics or pandemics.

To start with, it is important to know who a Town Planner is. Olugbenga (2015) defines Town Planners as professionals who are involved in making long and short term decisions about the management and developments of our cities, towns, villages, and the country side with the aim of creating a balance between the conflicting demands amongst landuses-Housing, Industrial development, Agriculture, Recreation, Transport,etc and the

environment in order to allow appropriate development to take place. Town planner professes mastery or proficiency in planning skills and other related fields of knowledge and aptitudes that can effectively help to identify and prevent social, economic and environmental problems in general. Therefore, one of the ultimate aims of planners is the conceptualization, design, planning and management of smart, integrated, functional, sustainable and safe settlements for human habitation. In other words settlements should be developed within the framework of disaster risk reduction whether natural, artificial or epidemiological.

With the foregoing, this paper attempts to analyze the role of the town planners in addressing the challenges of pandemics. The study utilized secondary data sources and literature review. In what follows it treats thematic subheadings.

### **Understanding Pandemics**

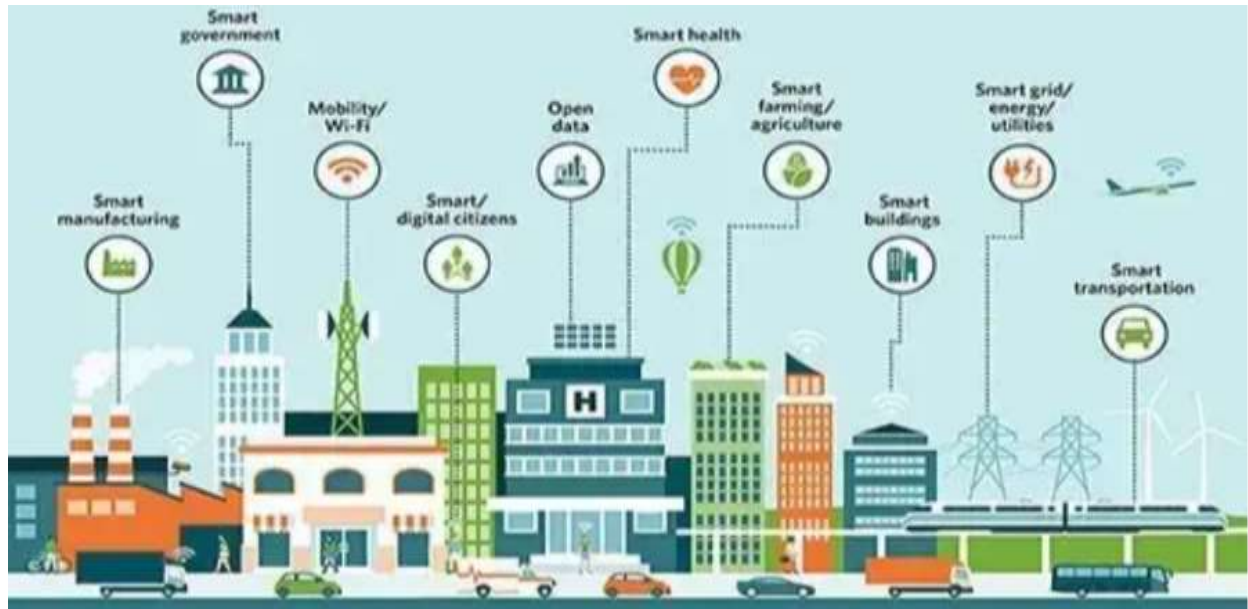
Pandemics are epidemics which occur in large scale even across international boundaries, and they are known to affect a large number of people (Porta, 2008; Wikipedia, Pandemic, 2020). The World Health Organization (WHO) previously applied a six-stage classification to describe the process by which a novel influenza virus moves from the first few infections in humans through to a pandemic. This starts with the virus mostly infecting animals, with a few cases where animals infect people, then moves through the stage where the virus begins to spread directly between people and ends with a pandemic when infections from the new virus have spread worldwide (Wikipedia, Pandemic, 2020).

One common way through which pandemics spread is through human interaction. In the case of the COVID-19 epidemic, the WHO (2020b) gave the facts on how it spreads. This includes getting the virus from others who have the virus in which the disease can spread from person to person through small droplets from the nose or mouth which are spread when a person with COVID-19 coughs or exhales. These droplets land on objects and surfaces around the person. Other people then catch COVID-19 by touching these objects or surfaces, then touching their eyes, nose or mouth. People can also catch COVID-19 if they breathe in droplets from a person with COVID-19 who coughs out or exhales droplets. This is why it is important to stay more than 1 meter (3 feet) away from a person who is sick (WHO, 2020b).

This is a challenge however, especially with the growth of human populations which has increased tremendously over the years and is found to be more in cities and urban centers of the world. Osingor (2020), noted that long before they had the data to prove it, doctors suspected city amenities, layouts, population counts, and sanitation measures impacted how diseases spread and in turn, the severity of epidemics. This shows that the city design has a correlation and impact on the outbreak and control of diseases and pandemics. Settlement design and planning is concerned with both the allocation (allocating adequate space for each of the various activities that occupies space) and location (evolving a landuse pattern which makes all human activities in space functionally related) In addition, it strives to guide and control the varieties of the changing activities in the constantly changing environment of the planned areas through the use of current planning standards and paradigms that are expected to work physically, politically, economically, socially and environmentally in a timely and practicable way. Thus, while planning organises, control and coordinate spatial distribution of human activities in the interest of the economy and social management, urban and regional planning tries to develop the capability that is necessary to accommodate the impacts of various changes (whether changes due to technological development or otherwise) at the local, urban, regional and global levels.

### **Concept of Smart Cities**

A smart city is seen as a municipality that uses Information and Communication Technologies (ICT) to increase operational efficiency, share information with the public and improve both the quality of government services and citizen welfare (Margaret, Sharon, & Ed, 2019). A smart city's value comes not just as a result of the technology found in it but as well as the use of such technology. Smart cities work with technology-based infrastructure; environmental initiatives; a high functioning public transportation system; a confident sense of urban planning and humans to live and work within the city and utilize its resources. A conceptual presentation of a smart city is given below.



**Figure 1: The smart city components**

**Source: Margaret, Sharon, & Ed (2019)**

The concept of smart city in this case is necessary to ensure there is the smart flow of all the city's components in order to ensure that pandemics are curbed and as much as possible avoided when necessary. This can be achieved through the network of data available to the planners in order to ensure the needed city components are achieved and put in place. The smart city concept is known to work with the Internet of Things (IoT), which includes smart transportation, smart buildings (new buildings constructed with sensors to not only provide real time space management and ensure public safety, but also to monitor the structural health of buildings), smart environment as well as smart infrastructures.

Smart city initiatives also aim to monitor and address environmental concerns such as climate change and air pollution some of which can be used to spread pandemics hence ensuring the city stays safe at all times. Waste management and sanitation can also be improved with smart technology, be it using internet-connected trash cans and IoT-enabled fleet management systems for waste collection and removal, or using sensors to measure water parameters and guarantee the quality of drinking water at the front end of the system, with proper wastewater removal and drainage at the back end (Margaret, Sharon, & Ed, 2019). The smart city concept is necessary to help curb the spread of pandemics by providing urban planners with the required



information needed to plan for the city so as to ensure the necessary facilities needed to curb diseases as well as curtail pandemics are put in place. As stated by Olugbenga (2015) planning improves the overall well being of people and communities by creating more accessible, equitable, healthy, efficient, and attractive places to live, work, learn and play and this can only be achieved when the right political will and data are available to ensure proper city planning takes place – this is the idea of a smart city.

### **Defining the Roles of the Town Planners**

Town planners have a lot of roles to play in curbing the spread of pandemics. As noted by the UN-Habitat (2009) urban planning is essential to crafting solutions to the pressing urban problems of the 21st century, yet the professional planning practices in place have not always been able to keep pace with the challenges faced by urban areas. This is particularly the case in developing countries. Rapid urbanization in most developing countries has forced planners to respond to escalating demand for housing, infrastructure and services – from both formal and informal sectors (UN-Habitat, 2009). The pressure of responding when such pandemics or even the escalating demand for housing, infrastructure and services occur is not always the best, as pressure often at times creates an atmosphere for failure and mistakes to occur. Hence, defining the roles of planners becomes necessary.

#### **i. Smart Planning**

Planning is never a haphazard job or one that is done nonchalantly. Nonchalant planning will only result in more chaotic environment. Planners are meant to develop long and short term plans to use land for the growth and revitalization of urban, suburban, and rural communities, while helping local officials make decisions concerning social, economic, and environmental problems. Because local governments employ the majority of urban and regional planners, they often are referred to as community, regional, or city planners (Olugbenga, 2015). Since planners are the backbone to the development of towns and cities, smart planning is necessary to avoid the growth and development of slums and shanty settlements in the environment. This is because one of the areas which are affected most during pandemics are slums and shanty settlements due to the high number of persons concentrated in such

environment. As noted by Rogier (2020), density is a good thing for cities, and it will be again, and most of the areas with high density are the areas with slum or shanty settlements because there the urban poor resides in most cases and such people are the most vulnerable.

In planning for development, the town planners ensure all land uses are put into their best use, this also includes public spaces for various activities including health centers as well as open spaces for use of various activities. A case in point, was China establishing emergency health centers for curbing the pandemic even in highly populated areas, this could not have been achieved without the help of proper city planning and the town planners. In helping to curb the spread of pandemic, planners helps to ensure all the necessary activities needed to ensure an equitable, self-sufficient and smart city is achieved by including all that is necessary to achieve this which includes but making decisions relating to establishing alternative public transportation systems, developing resources, and protecting ecologically sensitive regions as well as providing necessary spaces for other perceived uses such as creating isolation centers and health centers/facilities are necessary areas.

Olugbenga (2015) noted that urban and regional planners' addresses issues such as traffic congestion, air pollution, and the effects of growth and change on a community. They may formulate plans relating to the construction of new school buildings, public housing, or other kinds of infrastructure. Some planners are involved in environmental issues ranging from pollution control to wetland preservation, forest conservation, and the location of new landfills. Planners also may be involved in drafting legislation on environmental, social, and economic issues, such as sheltering the homeless, planning a new park, or meeting the demand for new correctional facilities (Olugbenga, 2015). Planners examine proposed community facilities, such as schools, health centers, hospitals and other urban facilities to be sure that these facilities will meet the changing demands placed upon them over time. They keep abreast of economic and legal issues involved in zoning codes,

building codes, and environmental regulations. They ensure that builders and developers follow these codes and regulations.

**ii. Population Control**

One function of the town planners in sustainable settlement design is the act of population control through density control. This is achieved through proper planning of cities, towns and villages. Planning deals with population, and one of the way through which pandemics spread is through human interaction, and this is common in the urban centers where there are large numbers of people. As Rogier (2020) asserted, the population of the urban centers are on the rise and as inhabitants increasingly cram into cities, potential infectious diseases could spread faster due to people living in close quarters. As noted earlier, slums and areas with shanty structures are more vulnerable to such infections. Hence, one way to achieve quality health is through population control. This can be achieved through smart planning of neighbourhoods with the necessary facilities as well as birth and population control through government intervention by helping the government plan on population control measures in the towns and cities as well countries in general.

Olugbenga (2015) further noted that planners also deal with land-use issues created by population movements by developing transportation models which would help achieve better transportation and explain their details to planning boards and the general public. This would act as a control measure both in the urban and rural areas.

Another way through which population control is done by planners is the provision of basic facilities and amenities in every district or region. Regional planning when incorporated in various levels of planning helps to ensure that there is equal distribution of resources in every region, which would as a matter of fact help to restrict the flow and movement of people from one region to another, thereby controlling population growth and movement in the towns and cities, preventing the spread of diseases and infections along the line.



**iii. Focus on Access to Core Services**

Services are needed to keep the city or any area of development running. Lack of access to basic services serves as a cause of movement for most people as they go in search of such facilities. In fact, density is the precondition for effective urban service provision, and far too many people in cities today lack access to basic services. It is the lack of access to essential services such as water, housing and health care that has exacerbated the challenge of responding effectively to COVID-19 as well as other pandemics in many cities (Rogier, 2020).

In Nigeria as well as some parts of Africa, access to core services such as electricity, water as well as other services needed for effective growth and functioning of city centers are readily not available due to the inability of governments to provide such facilities. Corruptions as well as other nepotism practices have further exacerbated the lack of these services. Hence, a lockdown order as proposed by governments is almost impossible as the lack of these services will drive the urban residents to go in search of them for survival. This explains the spat of resistance by some segments of the populace in defiance of the lockdown. For the foregoing reason Rogier (2020), opined that there is a need to close this urban services divide in order for cities to move forward. Therefore, the town planners need to effectively push on the government through advocacy to ensure the provision of these services.

**iv. Planning for Affordable Housing and Public Spaces**

Housing is a necessity and everyone needs shelter for effectiveness and proper functionality. Without proper access to housing, there is likely to be more problems in the city as there will be people lying and living on the streets. On this note, Rogier (2020) observed that how we plan our cities determines to a large extent how resilient they are. He further noted that population density without adequate public spaces or proper affordable housing provision will lead to problems. This was the reason many housing laws and regulations were implemented in Europe at the beginning of the 20th century, halting many diseases, for example. COVID-19 may prompt changes

too, from temporary measures that make it feasible for people to follow social distancing guidelines to more lasting changes that should focus on improving access to affordable housing and public space like upgrading more informal settlements in place (Rogier, 2020).

According to Rogier (2020), more than 2.5 billion urban dwellers will be added to the world by 2050 with 90% of them in Africa and Asia. It is estimated 1.2 billion city dwellers lack access to affordable and secure housing today. As it turns, a large share of future growth is going to be unplanned, which could raise this number to as high as 1.6 billion people by just 2025. Access to housing is a must for all, this is why many advanced countries of the world have over time come up with policies and measures to improve on housing by working side by side with the town planners, to ensure housing is available and affordable for all. In achieving this, Olugbenga (2015) noted that before preparing plans for community development, planners report on the current use of land for residential, business, and community purposes. Planners reports must include information on the location and capacity of streets, highways, airports, water and sewer lines, schools, libraries, and cultural and recreational sites. Using this information, along with input from citizens' advisory committees, the town planners design the layout of land uses for buildings and other facilities, such as subway lines and stations after which proper recommendations are given on the proper use of such lands. The urban and regional planners do often confer with land developers, civic leaders, and public officials in presenting the proposals and may function as mediators in community disputes, presenting alternatives that are acceptable to opposing parties and they may also prepare material for community relations programs, speak at civic meetings, and appear before legislative committees and elected officials to explain and defend their proposals.

**v. Increased Awareness**

Information is the mother of growth and invention. Understanding how pandemics and diseases spread can help to create an atmosphere of caution and awareness can help people achieve

better and quality healthy measures for improving their lives and keeping healthy. In the course of study on how corona virus (COVID-19) which is the latest of the pandemics spread, it is seen that one of the causes is the lack of awareness of the dangers, signs and symptoms of the spread. Hence, the WHO (2020b) in their website gave the most common symptoms of COVID-19 to be fever, tiredness, and dry cough. Some patients may have aches and pains, nasal congestion, runny nose, sore throat or diarrhea. These symptoms are usually mild and begin gradually. Some people become infected but don't develop any symptoms and don't feel unwell as it all depends on the immune system of the infected person.

The town planners who are the environmental doctors in creating awareness joins the media as well as other necessary health organization/information bodies to draw up measures to control the spread of pandemics in cities, towns and villages as the case may be. The town planners gather up the necessary facts from the health organizations and helps to carryout continuous awareness programs through media, jingles, posters, internet sources, messages, campaigns and other measures of spreading information can help people become aware of the need for achieving a healthier society and keeping safe at all times, thus helping to curb the spread of diseases and infections. In carrying out awareness programs, the town planners help to inform people on the need to prevent social stigmatization as well as avoid the issue of fear and panic, which are the major drivers of panic and dangerous actions which might end up creating a tensed and unsettled environment in the cause of a pandemic.

**vi. Create an Atmosphere for Law to Thrive**

In planning for smart cities, one of the roles of the planners is to plan for proper security measures and development to thrive in the villages, towns and cities. During pandemics, one of the ways through which lockdown orders can effectively work is through the enforcement of law and order by the necessary bodies in charge. Town planners needs to ensure they plan for locations for security posts as well as other law enforcement centers, so that in cases of

pandemics, these security operatives can help to ensure the necessary laws given by the local authorities including any restrictions put in place on travel, movement and gatherings are respected and obeyed by the people as the case may be. The town planners can also work with the government and other local authorities to formulate policies that can help to achieve safer and smarter cities by giving them advice and drawing up measures that can help to create a better environment.

### **Conclusion and Recommendation**

Pandemics are periodic given the history of recurrence at one point in time and everyone would seek to ensure they play their part in curbing the spread of such pandemics. COVID-19 is only an eye opener on what the urban planners can do today to solve the spread of pandemics in the world, their roles are enormous and just as the doctors are to the body, and they also are to the environment as the aftermath of every activity falls back to the environment. Learning to live and knowing that taking the necessary steps put in place by the government would help to curb the situation as it would only be for a little while and soon it will become history. Hence, as the environmental doctors, it is recommended that

- i. The government and other agencies should pay attention to the advice of the town planners in their decision making process to ensure cities are livable and are not centers for the quick spread of diseases and infections
- ii. The town planners should help to carryout campaigns and other information services to inform people on the need to take precautions and take necessary measures to improve their environment by taking proper hygiene measures and ensuring they maintain cleaner and safer environment.
- iii. There is the need to avoid the spread of lies, fear and panic during pandemics as this can result in more harm than good. This can be achieved through continuous awareness by the planners and other necessary bodies.
- iv. Planning should be strict and ensure that there is orderliness in the towns and cities in order to ensure proper development of towns and cities. This must be achieved through effective development

control measures that ensure that all development standards are not compromised, that space per person is adhered to during design and implementation among others.

- v. Population control should be adhered to in order to ensure the adequate population for any facility is not exceeded to avoid overstretching such facilities leading to the untimely death and decay of such facilities. This is achieved through the regular review of population statistics in a city and available infrastructure that must serve them. When this is done at interval, the need for facility upgrade might be a way of keeping such city smarter.

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