

# Incidence and prevalence of tuberculosis in the uk



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**ESSAY TITLE:**

Using two theoretical perspectives discuss with reference to the prevalence of ONE disease, E. g. Diabetes, Respiratory diseases; how Disease patterns in society vary and the role of public health agencies in reducing disease and promoting health?

**Chapter 1****Introduction**

Society is constantly changing, and these changes come with different social and environmental problems, which result to the emergence of new diseases and an increase in the incidence of existing ones, which affect human health and society as a whole. These include diseases such as cancer, respiratory diseases, diabetes, hepatitis, asthma and human immunodeficiency virus (HIV) just to mention a few.

In this essay, I will be analysing the incidence and prevalence of Tuberculosis and the pattern of this disease in relation to changes in society. I will also be comparing two theoretical perspectives regarding the nature and causes of Tuberculosis. To conclude, I will be analysing the role and impact of public health agencies in reducing the disease and actively promoting health.

**Chapter 2****1. 1. Incidence and prevalence of Tuberculosis in UK.**

Definition;

Tuberculosis popularly known as TB, is said to be an infectious disease usually caused by a bacterium known as *Mycobacterium tuberculosis*. TB often affects the lungs but can also spread to any part of the body through the bloodstream. Classic symptoms of TB include; persistent cough, fever, weight loss, loss of appetite and tiredness. TB is contagious and is mostly transmitted from person to person. An infected person can infect about 10 to 15 people over a year if not treated. (NHS choices, 2014).

Incidence and prevalence rates;

Some decades ago the UK was said to have an increase number of reported TB cases. From 2005 the number of reported cases remained high but stable. In 2009, there was said to be about 9000 cases of TB reported. An incidence rate of 15 case per 100.000 population. This can be said to be the highest since 2005. Then in 2010, the number of cases was 8483, an incidence rate of 13.6/100.000 population. This shows a decrease in the number of reported cases by about 4.9%.

In 2011, there were 8963 cases reported, an incidence of 14.4/100.000 population which again was an increase compared to 2010. Then in 2012, there was 8751 cases, an incidence rate of 13.9 cases per 100.000 population.

About 8000 cases of TB was recorded in 2013 in the UK that is a rate of 12.3 cases per 100.000 population. This shows a 10.4% reduction rates in the number of cases reported. (Public Health England, Tuberculosis in UK: Annual reports).

The population of UK mostly infected with TB are those born outside the UK. That is those from countries with highest prevalence rate of the disease. For example, India sub-Saharan African, Pakistan, south Asia, Somalia. This group of people usually dwell in urban areas that seem to have the highest number of cases reported. For example London, Luton, Manchester, Coventry Leicester and Birmingham.

### Chapter 3

#### 1. 2. The pattern of Tuberculosis in relation to changes in society

Throughout the last 20 years, the UK has been experiencing a steady rise in the number of TB cases. The most affected areas are the urban areas highly populated with immigrants. The rising number of cases in these areas has been related to the pattern of change in how the TB is spread and controlled. For instance, it does not spread through all the segments of the population as it has done previously, but rather affects the population of people in the high risk group.

“...those most at risk remain individuals from ethnic minority groups, those with social risk factors such as a history of homelessness, imprisonment or problem with use of drugs or alcohol, and the elderly”. (Public Health England 2013).

The small percentage fall in the rates of TB cases in 2012 and 2013 is said to be associated with the fall in the number of cases in the non-UK born population. This may be due to changes in immigration policies and policies to control the disease in the UK and abroad. For instance, around 2007, pre-

entry TB test was a requirement for Ghanaians applying for more than six month visa to the UK.

“ While this decline is welcome, it is important to recognise that the vast majority of TB cases in the non-UK born population (85%) occur among settled migrants rather than new entrants. Tackling the reactivation of latent TB in such migrants will require systematic implementation of screening and treatment of latent TB infection”. (Public Health England 2014).

## Chapter 4

### 2. 1. Theoretical perspectives of Tuberculosis.

There are so many theoretical perspectives with their individual view about the nature and causes of diseases. There are sociological theories viewing health and diseases in the context of society, and there are psychological theories viewing health and diseases and the context of the mind and so many others. Theories are sometimes useful to public health agencies and the government for the planning of health policies and interventions. In this essay, I will be discussing two theoretical views of tuberculosis, namely the Germ Theory and Biomedical Theory.

#### The Germ theory

Around 1850 and 1920, the Germ theory was established, attested and promoted in North America and Europe. This theory stated that every disease is caused by specific invisible tiny organisms (germs). It was a theory that was well matched to the prevailing concepts of health and diseases particularly those connected with the 19<sup>th</sup> century hygiene and sanitation.

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Joseph Lister, Robert Koch and Louis Pasteur are some of the well-known persons in connection with the germ theory.

This theorist believed that disease can be reduced by means of personal hygiene. They did not pay much attention to other factors such as climate, diet, environmental ventilation etc. Base on this, hygiene and sanitation promoters such as Florence Nightingale and Rudolf Virchow did not accept the theory. To them the germ theory could not be related to the progresses in public health.

The theory was established in a social, cultural and economic settings that were highly focused on the principles of mass production, mass consumption, standardisation and efficiency which were harmonious with the discipline of the theory. The high achievement of the theory coupled with the fact that medicine was linked to laboratory resulted in a rise in the social prestige of physicians and medical research and practice. This happened at the time when the general public was uncertain about the significance of traditional medical practice. To rise a new public consciousness of the theory, the general public was made to understand that diseases are not only cause by germs, but also they are passed on from person to person. Germs were related to home hygiene, including cooking, plumbing, and heating. Therefore women were the main targets used to spread the information about germs. (Harvard University Library Open Collections Program, 2015).

“ In the case of tuberculosis, which formerly had been considered noncontagious, basic changes in everyday hygiene were required. Mass

production, mass communication, and national advertising had developed alongside the germ theory during the same period, and the tools of public relations were put into play to inform the public about TB's contagiousness, as well as to inform people about the germ theory in general". (Harvard University Library Open Collections Program, 2015).

### The biomedical perspective

The biomedical perspective on the other hand believe that a sick person is presumed to be an inert receiver of orders from medical professionals (doctors). This theory sees diseases as biomedical problems that are caused by bacteria or viruses, and treatment is targeted on the sick person's body. A sick person is seen as a broken person who need to be fixed. This does not consider other factors that may be causing the health problems. For instance social, environmental and psychological factors. When a patients does not respond to treatment, it is assumed to be caused by the individual characteristics such as age and gender.

Policies and practice of health care services can be said to be based on this theory. Doctors are the authority who give instructions and patients are the receivers of the instruction. Medication Event Monitoring Systems (WHO 2011), used to monitor adherence is embedded in this perspective. In spite of its inherent use by many health professionals, this perspective is uncommonly used openly in interventions. (BMC Public Health, 2007)

## Chapter 5

### 3. 1. The role of public health agencies in reducing Tuberculosis

Tuberculosis is a worldwide health problem which has put government and public health agencies on their toes. Every nation is working hard to control if not eradicate the disease. In the UK, the Local Government Association, Public Health England, the NHS and other public agencies are working together to come out with policies, procedures, practices and measures that will help control the spread of the disease. Some of these include:

#### Pre-entry screening

The government has introduced a pre-entry screening programme for TB in countries noted to have high incidence of the disease. Residents of those countries who are applying for more than six month visa to the UK has to undergo TB screening. This screening involve chest x-ray and checking for symptoms. Those found with active TB will have to undergo treatment before they are issue visas. (Local. gov. uk, 2014).

#### Use of Anti-TB drugs

A mixture of anti-TB drugs are given to patients to lessen the possibility of the TB bacteria becoming resistant to one or more of them. Patients are usually started on a six months course of anti-TB drugs which is made up of four different drugs. The six month course of anti-TB is said to be the most effective period that will guarantee that the inactive bacteria are killed and cannot reactivate to cause TB in future. (Local. gov. uk, 2014).

#### BCG Vaccination

BCG vaccination are being offered to babies, infants and young children who come from countries with high rates of TB. Those born in the UK to parents



from the high risk zone are also given the vaccine to protect them from the diseases.

Early discovery, diagnosing and treatment is said to be another way of controlling the diseases. Healthcare workers are also advised to take the vaccine because they stand the chance of getting infected at work.

## Chapter 6

### 3. 2. The impact of public health agencies in reducing Tuberculosis

Tuberculosis has been seen to have a huge health and social effect on those infected. The existing inequalities in deprived areas is seen to be rising because of this disease. The Chief Medical Officer has recognised the inequalities, and increasing levels of antimicrobial resistance, as primary concern for England. The Health and Social Care Act 2012 has made it the responsibility of local government, clinical commissioning groups (CCGs), Public Health England (PHE) and NHS England to reduce the inequalities.

It is believed that the NHS, CCGs and Public Health will be making savings if TB is eradicated. Because it costs a lot to diagnose and treat drug-sensitive and resistant forms of TB. Some of the tasks set up to achieve this are;

1. Improve access to services and ensure early diagnosis
2. Provide universal access to high quality diagnostics
4. Ensure comprehensive contact tracing
5. Improve BCG vaccination uptake

6. Reduce drug-resistant TB

7. Tackle TB in under-served populations

8. Systematically implement new entrant latent TB screening

9. Strengthen surveillance and monitoring

(gov. uk website, 2015)

## Chapter 7

3. 3. The role and impact of public health agencies in actively promoting health

It is the responsibility of every individual in a society to keep themselves healthy. The public health agencies of every society also have the responsibility of helping the members of that society to stay healthy. Some of the responsibilities of health agencies such as the NHS in promoting health as recommended in a report from the NHS Future Forum (gov. uk) are;

- Healthcare professionals making every contact count; to do so they will need to ensure that every contact they make with a patient should help to improve their mental and physical health and wellbeing.
- Improving the health and wellbeing of the NHS workforce by designing and implementing strategies to improve the mental and physical health and wellbeing of staff.
- Refocusing the NHS towards prevention and promotion; all providers of NHS-funded care should strive to prevent poor health and promote

healthy living by incorporating it into their daily business, and they should be recognised for achieving excellence.

- Building partnerships outside the NHS; NHS commissioners and providers of NHS-funded care should work together with other local services to promote health and wellbeing in areas where the NHS finds difficult to reach.
- Sharing learning and best practice; Healthcare professionals, NHS commissioners and providers of NHS-funded care should share learning about improving the public's health and wellbeing and reducing health inequalities, and seek to learn from others. Public Health England should ensure that evidence and best practice are spread across the NHS.

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