



Prifysgol Cymru
Y Drindod Dewi Sant
University of Wales
Trinity Saint David

Student Name: Shazia Khatun Rahman

Student ID: 2511888

Module: Introduction To Public Health

Module Code: LCHS 4008

Assignment Title: Report on a health issue

Tuberculosis

This assignment will give you a brief overview on the disease known as tuberculosis (TB), a contagious airborne bacterial infection caused by 'Mycobacterium Tuberculosis' that mainly affects the lungs but can also affect other parts of the body. Symptoms include a prolonged cough, weakness or tiredness, chest pain, sudden weight loss, fever and night sweats. According to the World Health Organisation (WHO), tuberculosis is a serious worldwide health issue, affecting around 10 million people each year. Despite treatment plans being available, over 1 million individuals die from this disease annually, making it the world's "top infectious killer". The NHS also highlights that TB can become severe if not treated early. The assignment will cover the main signs and symptoms of tuberculosis as well as the different methods used to monitor and diagnose the disease. It will also show how the disease is controlled and prevented, including treatments available. The impact of the disease on individuals, families and the communities will be spoken about, highlighting social and economic factors. Furthermore, the role of health and social care services in managing tuberculosis will be discussed, including how different healthcare professionals support patients through treatment plans, diagnosis and recovery.

What are the different approaches used to measure and monitor this disease?

Tuberculosis measurement and monitoring involve a range of different diagnostics, imaging and immunological tests to detect infection and disease. Key approaches include screening methods, chest x rays, sputum tests, and blood tests. According to the World Health Organisation, early detection is extremely important as it will help reduce the spread of tuberculosis and ensure treatment is fast and effective. Screening methods such as the tuberculin skin test and interferon-gamma release assays (IGRAs) are often used to identify individuals who could be exposed to the condition. The tuberculin test detects Mycobacterium Tuberculosis by injecting a small amount of TB protein under the skin and checking the area after a few days for a reaction, which indicates whether the immune system has been exposed to the bacteria. The IGRAs are blood tests that measure the response of the immune system to TB bacteria and are often preferred because they require only one visit and results are normally visible within 24 hours making it a lot faster, reliable and accurate.

Chest x rays are used to check the damage caused in the lungs, while sputum tests are used to detect and identify bacteria or other germs in the lungs or airways to confirm the presence of Mycobacterium Tuberculosis. The NHS also uses these methods as well as contact tracing which is when close contacts with the infected individuals are tested and are provided with treatment or medication to prevent the spread of the disease. However, some methods may have some disadvantages as certain tests are not always accurate in detecting the disease, or may require multiple visits, which can be difficult and stressful for individuals. Monitoring the disease is significantly essential to track the spread, assess the effectiveness of treatment and prevent further transmission within the community, which helps protect public health.

What are the consequences of Tuberculosis in the community?

Tuberculosis has a range of different consequences on individuals and their communities, affecting health, social and economic wellbeing. One of the main impacts is on physical health, as the disease can cause chronic illness and could possibly lead to death in severe cases. Individuals with tuberculosis often experience long term symptoms like a persistent cough, sometimes with blood coming out, significant weight loss, fatigue, chest pain and fever, which can reduce the quality of life. In some cases even after a successful treatment is provided individuals still suffer from long-term complications like lung damage known as post-TB lung disease, which may result in ongoing breathing difficulties, chronic respiratory symptoms and reduced physical ability.

In addition, tuberculosis is highly infectious, especially if it's not treated earlier, as it spreads in the air through droplets when an infected individual coughs or sneezes. This increases the risk to people who are in close contact with the infected individual and the people within the community. It is also one of the main causes of death worldwide, highlighting how serious the disease is. Individuals with conditions such as HIV are more vulnerable and at a higher risk as TB is a major cause of death within this group.

TB also has significant economic and social issues. Many individuals often deal with stigma and discrimination, which may lead to social exclusion and strain on family relationships. This can also affect mental health, causing anxiety, fear of the disease worsening and shame. Due to the fear of stigma, individuals may delay seeking healthcare, which increases the likelihood of the disease spreading further. Economically, TB can have a major effect on patients and their families, as they could lose income as they are unable to work. Even when treatment is free, additional costs in their living, with some families having to borrow money or sell their belongings and household items which can lead to long-term financial difficulties. This may cause poverty within the infected individual and their family and impact the children causing disrupted education as they may be forced to drop out and work to support the family.

How is tuberculosis controlled?

Tuberculosis is controlled through a range of early treatment, infection control measures and medication management. One of the most important ways of controlling TB is treating people who have inactive TB infection, a form of tuberculosis where the bacteria is present in the body but it's not active. This means these specific individuals won't have symptoms and the disease is not spreadable with them. However, without treatment these individuals can still develop active TB in the future.

For people who already have active TB, control mainly focuses on preventing the disease from further spread of the infection. TB spreads through the air by infected individuals through droplets of coughs, sneezes, any form of communication where bacteria are releasable, especially in enclosed spaces with poor air circulation. People with active TB are often advised to take precautions like covering their mouths when coughing, disposing of tissues safely and avoiding close contacts with others. In some cases, they may also need to isolate themselves from work or school until advised otherwise by healthcare professionals to ensure safety of everyone.

Another key method of controlling TB is ensuring medication is consumed exactly as prescribed. Completing the full course of treatment is essential as stopping early or missing medication can cause the infection becoming drug resistant, meaning the TB bacteria has changed so the medicine used will no longer work. This makes the disease harder and more expensive to treat. Health professionals stress that patients need to attend all clinical appointments, so they can monitor the progress monitored as well as tests such as x rays or sputum samples can be repeated to check if the treatment is working and whether the patient is still infectious.

In healthcare settings TB is controlled through prevention plans. These include special isolation rooms with controlled airflow to prevent bacteria spreading to other patients. Healthcare workers also wear protective equipment such as N95 respirator masks when dealing with infected patients. These environmental and safety controls help reduce the spread of TB within hospital and other healthcare settings.

Whereas at home, controlling TB also involves practical steps such as keeping rooms ventilated, using fans to direct the air outside and separating sleeping areas from other household members where possible. These steps help reduce the chance of other people breathing in TB bacteria.

Overall, TB control relies on early detection, strict medication use, infection control and limiting exposure to others until the patient is no longer infectious.

What health and social care support services are required to meet the needs of infected individuals affected by TB in the community?

Supporting individuals with tuberculosis requires a wide range of health and social care services because the condition affects not only physical health but also mental wellbeing, social life and financial stability. A key part of care is community-based TB nursing teams. These nurses provide home visits, screening and contact tracing to identify others who could've been in close contact with the infected individuals. This helps prevent further spread within the families and communities.

Multidisciplinary teams play an important role. These teams include doctors, nurses, social workers and sometimes peer supporters who work together to manage both social and medical needs of the patient. This is especially important in because TB is often linked with other health conditions such as HIV, diabetes or substance misuse, which all need to be managed at the same time.

Mental health support services are also required. Many individuals experience, depression, stress, anxiety or stigma after being diagnosed with TB. Counselling, therapy and emotional support help patients cope with the diagnosis and may encourage them to stay committed to treatment.

Social care support is equally important. Some individuals may need help with housing, especially if they are homeless or have poor living conditions where TB spreads a lot more

easily. So providing a safe accommodation reduces the risk of infection spreading to others and increases the risk of a quick recovery with more cleanliness.

In some cases, legal and welfare support may be needed. This includes help with benefits, financial support or immigration issues, which will help reduce stress and allow patients to focus on their recovery.

Overall, these services work together to ensure that individuals with TB receive both medical treatments to help physically and social support to help emotionally and mentally, improving recovery outcomes, patients wellbeing and reducing the spread of the disease.

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