SYNOPSIS OF TB CONTROL IN GHANA TOWARDS COMMEMORATIONOF WORLD TUBERCULOSIS DAY 2019

Theme! It's TIME… Find the People Living with Tuberculosis (TB)

Each year, Ghana joins the rest of the world to commemorate World TB Day on March 24. A date set aside to commemorate the day in 1882 when Dr. Robert Koch announced his discovery of Mycobacterium tuberculosis, the bacillus that causes tuberculosis (TB). The commemoration of the World TB day is carried out annually in Ghana from March and continues throughout the year. Activities carried out highlights the menace of TB amongst the general public, the successes in TB prevention and control, and raise awareness of the challenges that hinder our progress toward the elimination of this devastating disease.

TB remains the world's deadliest infectious killer. Each day, nearly 4500 people loose their lives to TB and close to 30,000 people fall ill with this preventable and curable disease. Global efforts to combat TB have saved an estimated 54 million lives since the year 2000 and reduced the TB mortality rate by 42%.

In Ghana, following the National Prevalence Survey (2013), we now have a better view of the state of the epidemic. The estimates are:

- **Estimated Prevalence Rate (2017):** 282 per 100,000 population = **76,095 existing cases**
- **Estimated Incidence Rate:** 152 per 100,000 population = **44,000 new cases**
- **Estimated Mortality Rate:** 54 per 100,000 population = **15,200 deaths due to TB**
- **Estimated Drug Resistant TB:** **= 990 new cases per year**

Impact on the nation at the end of 2017, among the population of **29,000,000** Ghanaians is:

- End of 2017:

44,000 people **get** TB disease

15,200 people **die** from TB

- Every day: **121** new TB cases develop
  42 people die from TB

- Every hour: **5** people get TB
  2 person dies from TB

In 2018, the NTP achieved the following:

- **Cases diagnosed & put on treatment: 14,883**
- **Cases confirmed by Lab: 8,148 (54.7%)**
- **Number of Children diagnosed: 752 (5%)**
- **Number of Women diagnosed: 5,073 (34%)**
- **Tested for HIV: 13,105 (88%)**
- **HIV Positive: 2,544 (17.5%)**
- **Successfully Treated (2017): 86%**

The 2019 theme is, "**It is time! Find the people living with TB**". The theme calls on everybody that it is time to stop the rhetoric's and help find the people who are coughing and do not know what their condition is.

1. **It's time to speak up.**

It is time for everybody including The Executive, Parliamentarians, Judiciary, media, Chiefs, Religious bodies, the communities and all stakeholders to begin to talk about how we can strategize as a country to eliminate TB. What support we can offer to end TB. The public still do not think TB is existent in Ghana but it still is a major problem now that we have Multi Drug Resistant TB and Extensively Drug Resistant on our hands. People need to know what to do to avoid getting infected. And if you are infected or affected how to deal with it

2. **It's time to end stigma.**

TB patients tend to suffer severe stigma and are ostracized because of the cultural stigma attached to the disease. For example, tenants are evicted from their homes, marriage couples are divorced and some employees are sacked from their jobs.

According to the Ghana Demographic Health Survey, (2014), 83% females and 89% males had heard of TB. Of these respondents, about 80% of both sexes knew about its spread through coughing; 85% believed it could be cured but a third of females and a quarter of males wanted the information kept secret if a relative was diagnosed with TB. This still does not help us de-stigmatize the disease.

Fear of discrimination can delay people with TB symptoms from seeking help hence many arrive very late and gravely ill worsening myths that TB treatment leads to death. Delayed reporting creates the opportunity also for active spread of disease. Stigma around the disease also makes patients reluctant to stick with their treatment resulting in drug resistance.

3. **It is time to Stop TB deaths**

TB treatment is free in Ghana from diagnosis to completion. However, people who contract TB are dying needlessly from late diagnosis and undiagnosed TB. About %---------- of diagnosed cases are living below the poverty line, thus suffering from Malnutrition. Though there is nutritional support for patients, the programme wishes to get the government to support such patients financially to complete treatment and not die from other related disease due to lack of access to health care

4. **It is time for a world free of TB**

In Ghana, as part of the response to end TB, the NTP has put in place interventions throughout the country to improve on case detection. These interventions include

i. Improving hospital-based TB case detection
ii. Improving TB case detection among persons living with HIV (PLHIV)
iii. Improving TB case detection among other high risk groups (diabetics, children etc)
iv. Improving contact tracing &investigations in households of index pulmonary TB cases
v. Involving pharmacies and chemical sellers to improve TB case detection

5. **It is time to fully fund the TB response**

The Government of Ghana over the years has been committed to the course of ending TB. TB treatment is Free, Government employs health workers to look after patients, procured loans to buy digital xray machines to diagnose cases but there needs to be more. We need government to commit more for proper service delivery for these patients. At the moment there is no structured infectious disease control unit to manage MDR and XDR which posses a serious risk to the community

6. **It's time to know your TB status**

The general public should be eager to know their TB status. Every cough should be investigated at the lab to find out if it is TB related. In 2013, TB prevalence survey conducted showed that ------ patients meaning people who were not presenting with signs of TB has TB. The situation is compounded by the increase in HIV. HIV and TB are linked in that each speeds the other's progress. HIV weakens the immune system, so someone who is HIV-positive and infected with TB is far more likely to become sick with TB than if they were HIV-negative. TB is thus a leading cause of death among people living with HIV, So it is important that if you know your HIV status, you should go ahead and know your TB status as well.

TB Disease

Tuberculosis is a contagious bacterial disease caused by *Mycobacterium tuberculosis*. TB mostly attacks the lungs (pulmonary TB) but it can affect any organ in the body (extra Pulmonary TB). TB that affect other parts of the body is not as infectious as TB of the lungs.

Pulmonary TB is transmitted from a sick TB patient as a droplet infection through coughing, singing and sneezing. Inhalation of these droplets by an uninfected person may cause infection. The risk of contracting TB increases with the frequency and duration of contact with people who have the disease.

The cardinal symptom of pulmonary TB is a cough lasting 2weeks or more and for people living with HIV (PLHIV) a cough of 24hours is significant along with other constitutional symptoms.

Other symptoms are weight loss, tiredness, night sweats, chest pain and cough with blood stained sputum

Who Is at Risk

It must be emphasized that adults in most parts of the developing world including Ghana have been exposed to TB bacteria without knowing resulting in TB Infection. Those at higher risk of progressing to disease are: smokers, alcoholics, people living in overcrowded and poorly ventilated rooms, mine workers, and persons with lowered immunity due to medical conditions such as HIV, Diabetes, cancers, kidney failure and malnutrition.

However, TB is a preventable and curable disease. Diagnosis and treatment is available free of charge in all public and accredited private health facilities. It is also not a curse nor a hereditary condition and traditional medicine has not been proven to cure TB.

Diagnosis

A person who visits a hospital or clinic with symptoms of the disease is sent to the laboratory to do a sputum test. Two sputum samples are examined, one on the spot and the other in the morning of the next day or where inappropriate a second sample is produced at least 1 hour after the first spot sample.

If the patient is positive, he is counseled and commences treatment as soon as possible. In order to prevent lossto follow up during treatment, home visits are done and family members are counseled to serve as treatment supporters. Household members including children under 5 years of age living in the household of a smear positive patient are screened for TB. If they are positive they are put on treatment, if they are negative, they are put on Isoniazid preventive therapy (IPT).

Treatment

TB is cured with effective drugs usingthe Directly Observed Treatment (DOT)approach. The treatment regimen is for six months and divided into two phases: a 2month intensive phase and a 4monthcontinuation phase of treatment. Patients take their medications in theircommunity under the supervision of a treatment supporter who couldbe a community health officer, a relative of the patient or a volunteer. This strategy is known as Community TB Care. If the patient does not get cured after 6 months of treatment, they are enrolled on an 8 monthRetreatment regimen.

Note: A TB patient on effective treatment is less infectious after 2-4 weeks and does not spread the disease when they cough but still needs to cover their mouth. They must complete their treatment (6 or 8 months) to be completely cured.

New diagnostics for TB

The country has made strides in diagnosing TB cases in both adults and children. New diagnostic tools have been continually introduced to improve diagnostic capacity apart from the use of the standard light microscopes for sputum examination.

In 2007, the NTP introduced liquid culture MGIT (Mycobacterium Growth Indicator Tube) machines for the diagnosis of drug resistant TB. There are currently **6 sites** in Teaching and Regional Hospitals providing service with these equipment including the National TB Reference Laboratory network of Korle Bu Teaching Hospital and Koforidua Regional Hospital.

In early 2013, Light Emitting Diode (LED) microscopes were introduced to 156 high burden sites to reduce workload and improve speed of diagnosis. In addition, GeneXpert technology was introduced into selected sites to improve TB diagnosis among difficult cases such as PLHIV and children and for the early detection of drug resistant TB. This has been very successful and more machines have been deployed in all Regional Hospitals and Teaching Hospitals round the country. More Gene Xpert machines are being procured for 90 district hospitals round the country to improve TB among PLHIV and early detection of drug resistant TB cases.

The country is also gearing up to receive through the Dutch and Ghana Government co-financed ORIO Grant mechanism, **48digital x-ray machines** to be deployed round the country in support of the Programme's new strategy of active TB case finding using x-ray screening approach.

The Programme also now has capacity to conduct outreach services using a mobile laboratory donated by the International Organisation of Migration (IOM) and mobile x-ray machines procured through The Global Fund financing mechanism.

Improving Early TB Case Detection

i. Improving hospital-based TB case detection

Before the implementation of this intervention, TB case finding in health facilities was passive. Several patients were missed since there was no systematic approach to screening all the potential TB cases who may be presenting with significant and non-significant respiratory symptoms.

All patients attending OPDs are now screened for TB during vitals taking regardless of the symptoms they present with the aid of a symptom screening questionnaire. Patients who meet the

criteria of presumed TB (suspects) are fast tracked to the laboratory for sputum examination. Two (2) sputum samples taken within a day and those diagnosed with TB are put on treatment.

ii. Improving TB case detection among persons living with HIV (PLHIV)

PLHIV enrolled into clinical care are prepared for anti-retroviral therapy by screening for opportunistic infections. Using a symptom screening questionnaire, PLHIVs are systematically screened for TB at every visit if feasible and a minimum of two times a year. A history of 24-hour cough with or without other constitutional symptoms such as fever, drenching night sweats and weight loss are significant indicators for possible TB disease. Patients who meet the criteria of presumed TB (suspects) are fast tracked to the laboratory for sputum examination. Two (2) sputum samples taken within a day and those diagnosed with TB are put on treatment either in the HIV/ART Clinic or referred to the DOTS Corner within the facility.

iii. Improving TB case detection among other high risk groups (diabetics, children etc)

As part of routine care, diabetics accessing care at diabetic clinics are systematically screened for TB at every clinic visit using a symptom screening questionnaire. A history of 24-hour cough with or without other constitutional symptoms such as fever, drenching night sweats and weight loss are significant indicators for possible TB disease. Patients who meet the criteria of presumed TB (suspects) are fast tracked to the laboratory for sputum examination. Two (2) sputum samples taken within a day and those diagnosed with TB are referred to the DOTS Corner within the facility for treatment.

iv. Improving contact tracing & investigations in households of index pulmonary TB cases

TB patients who are diagnosed with TB are accompanied by a health worker to their homes for verification of their residential address as part of the process of enrolment into care. This is called Home Verification. The health worker during this and subsequent visits to the home identifies and screensall contacts (all persons within the household of the index case i.e. all who eat from the same pot with the index TB case) using a symptom screening questionnaire. The health worker will arrange for all TB suspects to have their samples taken for TB diagnosis either by sending

them to the laboratory or transporting their samples to the laboratory. Diagnosed patients are referred for treatment as soon as possible at the nearest facility. Where index cases are children less than 5 years, there is a likelihood of an adult index case in the home of the child. In this case adult contacts are screened for TB.

v. Involving pharmacies and chemical sellers to improve TB case detection

All clients visiting a pharmacy or chemical shop to buy cough medicines for their own use are asked few probing questions about their cough to identify possible TB suspects. These suspects are given information about the benefit of having a TB test done. They are given a sputum request form and directed to the nearest diagnostic centre specifically to see the facility Focal Person or directly to the laboratory. Where available a Volunteer may be available to escort this TB suspect to the health facility. At the facility, the suspect produces two sputum samples. On receipt of results, smear positive patients are sent to the nearest DOTs Corner for treatment.

Addressing Drug Resistant TB

Drug resistant TB occurs whenever a TB patient's sample is observed to have resistance to any of the first line TB medicines. Various types of drug resistance occurs such as mono and poly resistant TB. Most significant to the Programme is the occurrence of Rifampicin Resistance (resistance to Rifampicin alone or in combination with other medicines) and Multidrug Resistance (resistance to Isoniazid and Rifampicin together and in combination with other medicines).

Treatment of drug resistant TB is very difficult and expensive. Treatment lasts for 2 years including minimum 8 months of injections; side effects of medicines are very severe including hearing loss; medicines cost up to 100 times more than first line medicines ($25 compared with $2,500) and treatment outcomes are much poorer with the possibility of evolving Extensively Drug Resistant TB (XDR-TB) where resistance occurs to the second line medicines.

The NTP began enrolling multidrug resistant TB (MDR-TB) cases onto treatment in 2012 and at the last count about **182 patients have been enrolled onto treatment (2012 = 4; 2013 = 25; 2014**

=14; 2015 = 60; 2016 = 77). Of these numbers, **15 have been declared cured, 12 have died; 6 have defaulted from treatment, 51 are still on treatment**.

Programme Challenges

Major challenges exist in spite of the successes. Major Programme challenges include:

Low TB case detection. From a recent National TB prevalence survey conducted-2013, results show Ghana is detecting only one third (1/3) of presumed cases in the population. Furthermore, less than one third of the estimated Drug Resistance TB cases are detected and enrolled in treatment. The proportion of childhood TB cases notified has also been lower (5%) than the programme's acceptable target of 8-10%.

Last but not the least, the proportion of civil society (NGOs) and private sector contribution to annual TB case notification has fallen from 14.2% in 2009 to 5.6% in 2013.

Conclusion

The risk of TB in Ghana is high. TB anywhere is TB everywhere. We are all at risk. The good news is that TB is curable if we seek early treatment. Any person coughing for two weeks or more should report to the nearest health facility. We should try to avoid overcrowded rooms and ensure proper ventilation. TB patients should be encouraged to complete treatment rather than being ostracized.

It is therefore prudent to come together as a nation for It is Time to find the people living with TB

AREAS OF DISCUSSION

1. Why is the month of March set aside for Tuberculosis?
2. The rationale behind the theme, “It is Time, Find the People Living with TB”
3. Who is likely to get infected with TB?
4. What are the types of TB?
5. Is there any Protection against TB?
6. Is TB a threat to society?
7. How does one get infected with TB?
8. How can the individual know that he has TB?
9. How long does it take to treat TB?
10. Why does it take long to cure TB?
11. What happens if a patient does not take his drugs?
12. What happens if a person is not cured after the six months treatment?
13. Is TB cured with Herbal medicines?
14. How is TB and HIV related?
15. Should TB patients be separated from society?
16. What are the effects of TB on society?
17. What can the society do to help find the missing TB cases
18. What are some of the plights a TB patient goes through after diagnosis (especially from family, friends and society)
19. What have been some of the major achievements and challenges on TB management as a program and country?
20. Looking at the years, what have been some of the new technologies that have been introduced to enhance diagnosis?

Resource Persons

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2. Dr. Frank Bonsu
3. Dr. Adusi Poku
4. Dr. Akosua Badoo
5. Dr. Kojo Attor Essel
6. Dr. Hilda Boye
7. Dr. Adwoa Afranie
8. Dr. Oliver Commey
9. Mr. Felix Afutu
10. Adelaide Quartey
11. Mercy Baah
12. Stanley Mangortey
13. Cynthia Oware
14. Hilda Smith
15. Nelly Arthur
16. Helena Ntoa Boadi
17. Beatrice Adams Iddrisu
18. Eunice Dzasa
19. Hajia Salamatu Abdul Rahman
20. Asmawu Yaw
21. David Afreh
22. Jerry larbie