An Assessment of TB Awareness and risk factors in the patients and staff of Axim Hospital

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Background

• Tuberculosis (TB) is a curable and preventable infection caused by bacteria (*Mycobacterium tuberculosis*) most often affect the lungs.

• One-third of the world's population has latent TB and cannot transmit the disease.

• TB is spread from person to person through the air when person inhales few bacteria.

• People who are co-infected with HIV and TB are 21 to 34 times more likely to become sick with TB.

• About half a million children (0-14 years) fell ill with TB, and 64 000 (a range of 58 000 to 71 000) children died from the disease in 2010.
Background

• The symptoms of active TB: cough, fever, night sweats, weight loss etc. may be mild for many months.
• Therefore delays in seeking care, and the transmission of the bacteria to others occurs.
• People ill with TB can infect up to 10-15 other people through close contact over the course of a year.
• Without proper treatment up to two thirds of people ill with TB will die.
• Active TB disease is treated with a six-month course of four antimicrobial drugs provided with information, supervision and support to the patient by a health worker or trained volunteer.
WHO’s TB strategy

- Pursue high-quality DOTS expansion and enhancement. DOTS is a five-point package to:
  - Secure political commitment, with adequate and sustained financing
  - Ensure early case detection, and diagnosis through quality-assured bacteriology
  - Provide standardized treatment with supervision and patient support
  - Ensure effective drug supply and management and
  - Monitor and evaluate performance and impact;
  - Address TB-HIV, MDR-TB, and the needs of poor and vulnerable populations;
  - Contribute to health system strengthening based on primary health care;
  - Engage all care providers;
  - Empower people with TB, and communities through partnership;
  - Enable and promote research.
# Ghana TB Statistics

<table>
<thead>
<tr>
<th>Country Population</th>
<th>23,478,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Est. number of new TB cases</td>
<td>47,632</td>
</tr>
<tr>
<td>Est. TB incidence</td>
<td>203</td>
</tr>
<tr>
<td>(all cases per 100,000 pop)</td>
<td></td>
</tr>
<tr>
<td>DOTS population coverage</td>
<td>100</td>
</tr>
<tr>
<td>Rate of new SS+ cases</td>
<td>88</td>
</tr>
<tr>
<td>(per 100,000 pop)</td>
<td></td>
</tr>
<tr>
<td>DOTS case detection rate</td>
<td>36</td>
</tr>
<tr>
<td>(new SS+)</td>
<td></td>
</tr>
<tr>
<td>DOTS treatment success rate</td>
<td>76</td>
</tr>
<tr>
<td>(new SS+)</td>
<td></td>
</tr>
<tr>
<td>Est. new adult TB cases (HIV) + (%)</td>
<td>15.6</td>
</tr>
<tr>
<td>MDR-TB among all new TB cases (%)</td>
<td>1.9</td>
</tr>
</tbody>
</table>

All data are for 2007 except where otherwise noted. WHO Global TB Report 2009
Study Methods

• Qualitative Analytical Assessment of TB knowledge in patients and staff in Axim hospital.

Demographics

• N = 46
• Patients: 29  Employees: 17
• Male: 20  Female: 26
• Mean age: 27
BCG vaccination status

• 100% participants received the BCG vaccine at birth
  – Bacille Calmette Guerin (BCG) is the current vaccine for tuberculosis.
  – Most effective in protecting children from the disease.
  – It was first used in 1921.
  – The only vaccine available today for protection against tuberculosis
Axim Government Hospital

• In 2011, the mortality from all types of chest infections was reported to be 8.3%
Rationale

Performed a survey to access the TB education knowledge of both patients and employees at Axim Hospital.

Evaluated the TB risk factors and precautions at Axim Government Hospital
Do you spend time with people with TB?

Yes

No

Unsure

% of patients with the given response

Answers

Axim Patients

Axim Staff
Has anyone living with you had a positive PPD?

% of patients with the given response

Answers

- Yes
- No (Axim Patients)
- No (Axim Staff)
- Unsure
Do you spend time around people with HIV?

- Yes
- No
- Unsure

% of patients with the given response

- Axim Patients
- Axim Staff
Summary of Data Slides 1-3

• A significant percentage of both groups spent time with individuals with TB. However, many patients were also unsure if they’ve spent time with TB + individuals.
• Most people denied having a + PPD
• A significant percentage of both groups spent time with HIV+ individuals
Do you spend time around people that live in Nursing Home, Hospital or Prison

- **Yes**: Axim Patients
- **No**: Axim Staff
- **Unsure**

<table>
<thead>
<tr>
<th>Answers</th>
<th>Axeim Patients</th>
<th>Axeim Staff</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>100</td>
<td>0</td>
</tr>
<tr>
<td>No</td>
<td>10</td>
<td>100</td>
</tr>
<tr>
<td>Unsure</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>
Do you spend time with homeless people?

% of patients with the given response

- Yes
- No
- Unsure

Axim Patients vs Axim Staff
Do you spend time around people that use injection street drugs

% of patients with the given response

Yes
No
Unsure

Answers

Axim Patients
Axim Staff
Have you been asked these questions in the last 12 months?

- Yes
- No
- Unsure

% of patients

Axim Patients
Axim Staff
Summary of Data Slides 4-7

• A significant percentage of staff members spent time with individuals from populations that have an increased risk of TB acquisition
Have you seen a doctor in the past year?

<table>
<thead>
<tr>
<th>Answers</th>
<th>% of patients with the given response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>Axim Patients 24%</td>
</tr>
<tr>
<td>No</td>
<td>Axim Patients 7%</td>
</tr>
</tbody>
</table>
Have you had a + AFB Sputum

% of patients with the given response

Answers

Axim Patients
Axim Staff
Summary of Data Slides 8-9

• Most staff members have not been to a doctor in the last year for a routine check-up

• The majority of staff groups denied a history of a (+) AFB sputum. However 50% of patients report a + AFB sputum
Can you have a TB infection in the lungs?

- Yes
- No
- Unsure

% of patients with the given response
Can you have a TB infection in the Gastrointestinal Track?

<table>
<thead>
<tr>
<th>Answers</th>
<th>Axim Patients</th>
<th>Axim Staff</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>No</td>
<td>1</td>
<td>9</td>
</tr>
<tr>
<td>Unsure</td>
<td>7</td>
<td>12</td>
</tr>
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</table>

% of patients with the given response
Summary Slides 10-12

• Staff > patients know that TB can affect the lungs. The majority of patients denied or were unsure that TB infects the lungs
• A significant percentage of staff were unsure TB infected the GI track
• Most individuals in both groups denied a history of TB treatment
Do you use TB precautions when around TB+ individuals?

- Yes
- No
- Unsure

% of patients with the given response

- Axim Patients
- Axim Staff
Is HIV infection a risk factor for TB acquisition?

- Yes
- No
- Unsure

% of patients with the given response

- Axim Patients
- Axim Staff
• A greater percentage of staff implemented TB precautions when around individuals with TB.
  – Distance, used their handkerchief to cover their mouth and nose

• Most staff members reported that HIV was a risk factor for TB. However, the patient’s response was split. A similar percentage of patients responded yes, no and unsure.

• Most people in both groups denied a recent cough and the presence of a TB isolation area in the hospital.
Conclusion

• 100% of staff and patients received the BCG vaccination
• Most TB + patients are being closely followed and are on TB medication
• TB knowledge was decreased in patients < staff
• Staff > patients unsure about TB transmission to the GI track
• Both staff and patients spend time with at risk TB populations without implementing standardized TB isolation protocols
• General isolation ward for all infectious diseases exist in the Male Ward.
• No TB isolation ward present in female, maternity or children wards.
• TB isolation in VCT (HIV) clinic has not been implemented
  – Currently sometimes patients with a cough are asked to stand outside
Solutions

• Educated patients and staff on TB infection and transmission

• Distributed N-95 mask’s to hospital staff

• Limitations
  – utilization of N-95 mask– cultural barriers exist in utilizing the mask. Fear of offending patients
  – No area identified for TB isolation for children and women