

Strategies to prevent the spread of tuberculosis



**ASSIGN
BUSTER**

To address the problem of Tuberculosis (TB) within East London

Tuberculosis (TB) is caused by *Mycobacterium tuberculosis*. People who have infected sputum can transmit the disease to others. Since it is a notifiable disease accurate figures are available. There are about 7000 cases of TB annually in the UK mostly in the large cities especially London (Health Protection Agency figures). The number of cases has increased by 25% in the last ten years (Department of Health figures).

Issues

- Paucity of evidence will mean some decisions on strategy will encompass consensus decisions. Often it is not one single measure that is effective on its own.
- Those born abroad or homeless are at disproportionately high risk of getting TB. They must not be seen as being victimised if they are screened in preference to other people.
- The stigma associated with TB is counter productive to the programme. Potential patients are reluctant to seek investigation.
- Tannahill's (1985) three overlapping spheres of health promotion; health education, prevention and health protection, will be incorporated into the programme.

Prevention

Primary

This involves changing the environment, behaviour or both. Immunization is the crux here together with health education. The later involves knowledge, changing attitudes and behaviour (Donaldson, 2003).

Secondary

This involves early detection of TB and prompt treatment. It is necessary to screen asymptomatic individuals. TB fulfils the WHO screening test requirements (Wilson, 1968).

Tertiary

Rehabilitation needs to be effective and visible. If the community can see the care and curative treatment the stigma of the illness will lessen and more people come for screening.

Programme development

Since doctors and nurses do not empower but the community empowers itself (Bright, 1997) it is important that the community has control over the way the programme is set up and run. The issues need to be ranked in order of importance (Ewles, 2003). The programme design is one of health promotion and disease prevention.

The Healthcare Commission assesses how well the NHS meets the standards set by the Department of Health document 'Standards for Better Health' (2004). These standards include taking into account and implementing nationally agreed guidelines. It is therefore assumed, at least for the purpose of this work, that the NICE guidelines are implemented. The chosen program

will be supplementary and complimentary to the implementation of the NICE guidelines.

A force field analysis can help to determine the helping and hindering aspects the project is likely to encounter and may be valuable at an early stage in planning the project. It will be beneficial to look at ways of promoting the helping forces and lessening the unfavourable ones.

The rationale of the study

This is based on the policy on TB. The purpose behind this is that the sooner TB is detected the easier it is to treat and the less the risk of transmission to other people.

Aims and objectives

These are constructed from areas relevant to the NICE guidelines. There are two aspects to the programme and these are both directly obtained from the objectives of the NICE guidelines (2006).

1. The whole purpose of the NICE guideline is diagnosis and treatment (this is stated in the title of the guideline). Those who may be infectious to others require detection and treatment from the purpose of the own health interests and also in order to lessen the chance of transmission.
2. Treatment needs to be effective. The NICE guideline recognises the advent of drug resistance with failure of treatment and remaining risk of transmission.

Following directly on from these two points respectively there are two parts to the objectives of this programme:

1. **Diagnosis** Each case of sputum positive TB detected will be looked at to see if the diagnosis could have been made sooner. A group will assess the prior opportunities for earlier diagnosis and why those opportunities were missed. For instance was it a problem with the patient, the medical care, administration, resources. Each case will be classed to see if there was an element of sub standard care. Information thus obtained from the cases will be amalgamated to see if there can be any " lessens learnt" or whether targeting of resources in one particular aspect might help.
2. **Treatment** This consists of two parts (the cases concerned will be a subset of group one except for those cases diagnosed outside of the area):
 1. **Incomplete treatment** Each case where directly observed treatment was not completed will be looked at to see what factors might have enhanced compliance.
 2. **Drug resistance** Each drug resistant case will be looked at to see whether there were potentially avoidable factors in the development of resistance.

Target group,

The appropriate target groups for the different parts of the study are:

1. **Diagnosis**

All the sputum positive cases that are diagnosed in the area within the first six months.

2a) Incomplete treatment

All the cases who were on directly observed treatment and failed to complete it. They may be being treated somewhere else but if this cannot be confirmed they are classed as failure of treatment. Six months would be the time frame. Those complying with and still on their treatment at the six month point would not be classed as failure to give treatment.

2b) Drug resistance

All diagnosed cases of drug resistant TB diagnosed within the six months.

Since health inequalities are associated with social class (Black report, 1980) and material deprivation (Townsend, 1987) these groups will feature prominently in the cases. A study in London (Story, 2006) found that 321 of 1941 (17%) of cases of TB there were in people who were homeless, drug abusers or ex prisoners. These three factors were independently associated with poor treatment compliance. Of poor treatment compliance 38% of the patients were in one of these groups and 44% of smear positive and drug resistant cases were in one of these groups.

Setting and needs assessment

An integral aspect of this project involves identifying ways to change behaviour of those at risk of acquiring or having TB. The Health Belief Model (Becker, 1974) explains people will weigh up the benefits and risks of making

a change and the Theory of Reasoned Action (Ajzen 1980) adds in the influences of family and friends. To facilitate the change Ewles (2003) recommends;

- Working with the community
- Facilitating healthier choices
- Relating to individuals
- Dealing with resistance

When working with the community advocacy is a useful way of gaining representation from groups, and indeed individuals, whose views are difficult to obtain. Perhaps they do not speak English, perhaps they are homeless or abuse drugs. The advocates may be non-medical but have some things in common with the group they are representing. It is vitally important to make healthier choices more attractive to people. This will encourage them to present for screening, investigation or vaccination. Whilst this may be relatively easy for an ethnic minority community it is particularly challenging for the drug abuser or homeless person. Empathy with the problematic group and really understanding their views, motives and behaviour is inherent in this project.

In identifying whether diagnosis could have been made earlier or treatment completed the people involved in investigating aspects of the cases will need to include the groups of people from whom the index case arose. This will involve people from local ethnic groups, prisoners, drug addicts and homeless people. Most importantly of all it will involve the patients themselves. For instance, although much useful information will be gleaned from meetings with the above groups of people to try and evaluate the

<https://assignbuster.com/strategies-to-prevent-the-spread-of-tuberculosis/>

reasons why a particularly individual did not present themselves for screening or did not respond to a request to be screened or did not have a baby vaccinated it is going to be extremely valuable to discuss with the person concerned what factors led to the diagnosis being made at the time it was rather than earlier. Much valuable insight may be gained from this process or there again it might not. In a programme of this nature it is important to keep an open mind to whether something is going to work or not hence the importance of building in an appropriate method of evaluation at the design stage of the study. It is too late to add on the choice of statistical analysis once the data has been collected because it might not have been collected in an appropriate way.

Resources

To be comprehensive the resources will need to include;

Primary and secondary care, with consent issues handled at the time of diagnosis and treatment so that only patients willing to participate will be interviewed. A prior plan will need to be formulated in agreement with the ethics committee about what level of investigation can take and mechanisms of anonymising information. Patient confidentiality is of utmost importance. Patients attending genitourinary medicine clinics will often wish to remain anonymous. However this attendance is an opportunity for screening would provide useful information to the programme.

If the group set up to look into the issues of potential for earlier diagnosis and treatment failures are from the same local community they may well know the index case. This issue needs to be discussed at community level to

<https://assignbuster.com/strategies-to-prevent-the-spread-of-tuberculosis/>

find effective ways of making the process anonymous and gaining community confidence.

It is difficult to envisage at this stage where the source of funding will come for such a project. Perhaps the best scenario would be to run it at a loss as academic research perhaps involving students for higher degrees and then present the results of a pilot study to then try and gain some central funding to pursue the project on a wider scale. The worst scenario would be that it never becomes more than a research project. Much will depend on its evaluation results and perceived value partly as a result of its marketing.

A agencies, consumers and stake holders

The stake holders are those with an interest in the project and seeing how it is run. The stake holders are many and really encompass all groups primary and secondary care, groups outside of healthcare, and community groups. They all need an awareness of the programme. Some will be more directly involved than others and the degree of involvement will alter as the programme progresses.

Budget plan,

A costing plan and a template are discussed in detail in a Costing report (2006) for implementation of the NICE guidelines. If feedback from this programme results in earlier diagnosis and in more effective treatment there will be less transmission and less drug resistance. Costings are set out in the NICE documentation and so the relevant calculations can be made for cost savings based in estimates of the results of the programme. The costs

incurred will be of setting up the relevant community groups and analysing the cases. This will incur staffing costs and administration costs and likely costs for travel and other community member and patient related costs.

Policy evaluation

It is important to have a comprehensive programme of evaluation the features of which will shortly be outlined. There are three main purposes to the policy evaluation:

1. Can we identify aspects where significantly earlier diagnosis could have been made? If so what are these and what are the resource and practical implications of implementing them? The same question could be asked of avoiding incomplete directly observed treatment and of avoiding drug resistance.
2. If question one is answered in the affirmative can funding be secured for the project?
3. If question one is answered in the affirmative can the actions identified as valuable in that section be set up? If so this would represent effective feedback.

How evaluation will be carried out

Clinical and statistical significance must be distinguished. The former is arbitrarily chosen as one month for speed of diagnosis.

The relevant evaluation will be by qualitative methods of analysis. It will however be useful to compare the percentage where there was an avoidable factor in later diagnosis, treatment failure or development of resistance over <https://assignbuster.com/strategies-to-prevent-the-spread-of-tuberculosis/>

a time scale say a number of years to see if the whole systems approach is actually improving with regard to diagnosis or treatment.

References/resources Ajzen I Fishbein M 1980 Understanding attitudes and predicting social behaviour. Englewood Cliffs. Prentice Hall.

Becker MH 1974 The health belief model and personal health behaviour. New Jersey. Slack.

Black Report 1980 Dept of Health and Social Security Inequalities in Health: report of a research working group. London HMSO

Bright JS 1997 Health promotion in clinical practice Bailliere Tindall London

Costing report. 2006 NICE clinical guideline no. 33 Implementing NICE guidance in England Department of Health

Donaldson LJ Donaldson RJ 2003 Essential Public Health 2nd ed Petroc Press Berkshire

Ewles L Simnett I 2003 Promoting health, a practical guide. London. Bailliere Tindall.

Government's TB Action plan for England 2005

Health protection Agency www.hpa.org.uk/infections/topics_az/tb/menu.htm accessed 4. 5. 06

NICE guidelines 2006 Clinical guideline 33 Tuberculosis Clinical diagnosis and management of tuberculosis, and measures for its prevention and control. www.nice.org.uk/CG033 accessed 10 May 2006

<https://assignbuster.com/strategies-to-prevent-the-spread-of-tuberculosis/>

Standards for better health 2004 Department of health.

Stopping Tuberculosis in England Department of Health 2004

Story A Murad S Roberts W et al 2006 Contribution of homelessness, problem drug use and prison to tuberculosis in London.

Tannahill A 1985 What is health promotion? Health Education Journal 44: 167-8

Townsend P Phillimore P Beattie A 1987 Deprivation and health: inequality and the North. Beckenham. Croom Helm

Whitehead M Tones K 1991 Avoiding the pitfalls. London. Health Education Authority.

Wilson JMG Jungner G 1968 The principles and practice of screening for disease. Public Health Papers 34 Geneva. WHO.