NICE guidelines to improve TB management and prevention

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In response to concerns about the rising incidence of TB in the UK, NICE has issued fresh guidance on its prevention and treatment. In 2004 the World Health Organization estimated that 1.7 million people died from TB, mostly in Africa where the rise of HIV has contributed to the mortality rate (WHO, 2006). Despite available vaccines the global incidence of TB is rising, with a growth rate of 0.6% in 2004.

In the UK although most of the population is at a very low risk of TB due to vaccination, the number of cases reported is increasing. In 2004 there was an incidence of 13.1 per 100,000 cases in England, Wales and Northern Ireland, a 5% increase on the previous year. These increases mostly affect subgroups in major population centres such as London, which accounted for 44% of the total cases (Health Protection Agency, 2006). This is due to various factors including immigration from countries with a high incidence of homelessness and HIV infection.

Diagnosing active TB

The guidance provides recommendations for the diagnosis of both the respiratory and non-respiratory forms of active TB.

Nurses need to be aware that a person with respiratory TB may have a variety of symptoms including a persistent cough, chest pain, blood in the sputum, weakness, weight loss and loss of appetite.

The guidance recommends that anyone suspected of having respiratory TB should first be given a chest X-ray. If this indicates the presence of TB, other tests may be performed (NICE, 2006) (Table 1, p20).

Although TB usually affects the respiratory system, it can affect other parts of the body, such as the lymph nodes, kidneys and bones. The most accurate way to diagnose non-respiratory TB is by biopsy.

Treatment of active TB

The guideline re-emphasises the standard treatment regimen for active TB as (NICE, 2006):

- Combined isoniazid and rifampicin for the first six months alongside pyrazinamide and ethambutol for the first two months;
- Fixed-dose combination tablets as the first choice;
- In non-respiratory TB, daily dosing should be used. This applies to all drug-susceptible TB at all sites barring the central nervous system. It is recommended for all age groups and in patients who are HIV positive;
- A thrice-weekly regimen should be used for those receiving directly observed therapy (where patients are observed taking the medication). A twice-weekly regimen should not be employed.

Nurses can play a crucial role in adherence due to the extent of their patient contact.

It is vital that all nurses involved in the provision of TB treatment ensure that patients adhere to the treatment regimen for the full course. A failure to do this can contribute to the development of drug-resistant strains of TB.
The guidance recommends that nurses ensure patients are part of treatment decisions from the outset. This increases the chances of adherence, as patients feel they are more involved in their care.

The guidance stresses that adherence can be improved by nurses educating the person with TB about their condition as well as ensuring that patients know who their key worker is and how they can be contacted.

Nurses can ensure that any patient information they provide is in appropriate formats (for example, audiovisual) and in languages that are used locally. This is especially important in inner-city areas with high immigrant populations.

Nurses are ideally placed to intervene when patients do deviate from treatment. The guidance recommends a number of interventions, including (NICE, 2006):

- Reminder letters;
- Health education counselling;
- Interviewing patients and providing literature;
- Random urine tests;
- Information on help with prescription payments;
- Advice concerning benefits, such as housing benefit or disability allowance.

Nurses still have a role once treatment has been completed. Patients should be educated on how to observe for symptoms of recurrence and how to contact TB services quickly if necessary.

Preventing transmission and latent TB

The guidance recommends that once a patient has been diagnosed as having active TB, colleagues should be informed so any need for contact tracing can be assessed. In the case of TB diagnosed in a hospital inpatient, assessment and screening should include (NICE, 2006):

- Risk assessment, incorporating susceptibility of other patients;
- Manage patients as if they were household contacts if they have been exposed for long enough or are particularly susceptible;
- Perform contact tracing and testing only in patients considered significantly at risk.

Many nurses, especially those in inner cities, work with high-risk groups such as new entrants to the UK and homeless people and the guidance outlines special measures for preventing TB in these populations. For example, it recommends providing information on TB to new entrants and encouraging them to register with a GP.

With homeless people, opportunistic chest X-rays can be performed when they present with symptoms and nurses should consider offering incentives such as hot drinks and snacks to encourage attendance at clinics. Prison nurses should also be aware of symptoms among the prison population and promote awareness of TB among prisoners and prison staff (NICE, 2006). The prison population is especially vulnerable due to the prevalence of individuals with a history of substance abuse and homelessness.

Prison nurses can ensure that health questionnaires are provided for all new prisoners, that there is continuity of care for prisoners being transferred and that there is provision for continuing treatment after release.

Nurses also need to be aware of individuals who have latent TB and are at increased risk of going on to develop active TB. These include (NICE, 2006):

- People who are HIV positive;
- Injecting drug users;
- Those receiving haemodialysis;
- Those who have had a solid organ transplant.

BCG vaccination

The guidance offers extensive advice for nurses involved in vaccination, including school nurses and those working in areas with high rates of immigration. It stresses that nurses should always discuss the benefits and risks of BCG and that any information should be tailored to the individual. Specific guidance includes (NICE, 2006):

- Routine vaccination for children aged 10–14 is not recommended;
- Routine Mantoux testing before vaccination is not recommended in children aged under six years unless they were born in or have recently visited a high-incidence country;
- Vaccination should be offered to new entrants to the UK if they are from a high-incidence country, have no evidence of vaccination, are younger than 16 or are aged 16–35 but from a sub-Saharan country or one with a TB incidence of 500 cases per 100,000 of the population.