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Education

How is the role of the tuberculosis nurse pivotal in the multidisciplinary team?

EDUCATION

AUTHOR

Visha Rach
University of Exeter
Medical School

Address for Correspondence:

Visha Rach
St Luke's Campus
Heavitree Road
Exeter EX1 2LU

Email: var207@exeter.ac.uk

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ABSTRACT

Summary

This report explores the significance of the tuberculosis specialist nurse, the numerous individuals that cohesively work alongside them, and how some of the difficulties that are encountered in multidisciplinary teams (MDTs) can be approached.

Relevance

The UK has the second highest rate of tuberculosis (TB) amongst Western European countries. This makes it a topic which students should be aware of, in terms of how to manage the infection and the team that is involved in the care. Many specialist nurses work in the hospital environment, thus it is crucial to appreciate the roles they perform and where they stand within the MDT, to increase effectiveness when working alongside them. Learning about the range of professionals involved can help shape the skills required to work within the MDT. This report explores the role of the TB nurse within a MDT, which can be of use to students who are yet to enter the clinical years.

Take home messages

The MDT consists of a multitude of professionals, in addition to the patient and their family, so it is fundamental to have clear communication and collaboration. The TB nurse's role is pivotal in leading the MDT, being an advocate for the patient, maintaining continuity of care and educating those involved in the patient's care.

INTRODUCTION

Tuberculosis (TB) is a notifiable infection caused by Mycobacterium tuberculosis, which frequently affects the lungs, but can also affect other organ systems. (1) The most common route of transmission is through inhaling infected air droplets. Once infected, TB can manifest as latent or active; latent TB can progress on to become active TB in a proportion of people. (2) Latent and active TB treatment require different lengths of treatment time and drug regimens. (3) Risk factors for TB include being homeless, immunocompromised or in close contact with an infected person. (4)

Over the past four years, the incidence of TB in England has plummeted by a third, with 5,758 cases in 2015. However, the UK still has the second highest rate of TB in Western Europe. (5) Despite this reduction in the overall number, the proportion of these cases with social risk factors (homelessness, drug or alcohol misuse or imprisonment) has 'increased from 9.8% in 2014 to 11.8% in 2015'. (6)

This report will aim to emphasise the role of a MDT, the challenges faced and how the TB nurse works with the team.

ROLE OF THE MDT

A MDT consists of professionals from different specialities, to provide high quality care for patients. (7) The team aims to provide personalised care for patients through an abundance of expertise and skills in numerous disciplines.

Safety Net

The MDT approach forms a safety net to prevent errors - if a patient's symptoms are not recognised by one member of the MDT, then another member can still identify them. Unfortunately, due to lack of leadership, members of the MDT may not feel permitted or able to voice their thoughts. For example, if the patient mentions symptoms they've been experiencing to their radiologist, the radiologist may not feel responsible for acting. Therefore, to provide safe care, each member should assume the role of a leader when required. (8) The patient should also be included in this team, and be directed to speak to the case manager for any concerns.

Continuity of Care

Although MDTs allow patients the flexibility to express their concerns with particular members, it can be difficult to build a rapport with each individual. Continuity of care can be achieved by ensuring that each role is carried out by the same member of the team every time, (9) such as having the monthly review for TB treatment with the same nurse. Through using this approach, issues such as patients refusing treatment for latent TB can be tackled, as the nurse can explore their reasoning and work with them. Patients may refuse treatment if they are asymptomatic and do not understand the possibility of progression to active TB, and the severity of this. In these situations, a good nurse-patient relationship can be beneficial when explaining the risks of not starting treatment.

Communication

The MDT ensures each member is not overloaded with work and has a well-defined, important role. This large team of people can cause the patient to feel frustrated, having to continually repeat their story to each member of the team. Potential ways to overcome these challenges include regularly communicating findings and investigations with the rest of the team, and scheduling MDT meetings to inform each member about the plan for the patient. The TB nurse can often organise these meetings, particularly when they take on the role of the case manager.

An example of the MDT approach being used can be seen in London's 'Find & Treat' service. It is a specialist outreach team which screens for tuberculosis and provides treatment for people with social risk factors. The team consists of TB specialist nurses, social and outreach workers, radiographers, expert technicians and TB patient peer advocates. They currently screen almost 10,000 people each year. (10)

ROLE OF THE TB NURSE IN THE MDT

There is no set route to becoming a TB nurse, however, most of them have worked in respiratory medicine prior to specialising. Whilst there are no specific training courses, there is the option to attend courses. (11) Specialist TB nurses cover all aspects of patient care, from treating the patient, to helping achieve targets for Public Health England (PHE). Each patient has a case manager who works with the MDT to ensure that the patient is receiving the care and treatment that is required. This role is often taken up by the TB nurse, due to their high level of medical knowledge and skills that have been acquired through their work. They are able to take control of various aspects of the patient's care and communicate with the team, patient and patient's family, with their excellent use of compassion and communication.

Diagnosing the Patient and Working with PHE

Diagnosing a patient requires work from the consultant, TB nurse, radiologists, radiographers, lab technicians and microbiologists. Many of this team are involved in performing vital tests, such as X-rays and baseline blood tests, including testing for Hepatitis and HIV. During every review, the patient will have further blood tests to ensure their liver and kidneys have not declined from their baseline results. The case manager takes on the role of working together with this team to ensure each step is taken and that the results are communicated amongst the team.

Once a diagnosis of active TB is made, TB nurses are required to inform PHE and attain key personal information from the patient, such as if they've lived in another country for more than 3 weeks. (1) PHE strives to protect the public against TB, by setting aims such as: increase the uptake of the BCG vaccine, reduce drug-resistant TB and implement latent TB screening. (12) Although not solely responsible for these aims, TB nurses often engage in working towards them. For example, NICE guidelines suggest nurses can provide home visits to explain the importance of immunisations to those who are disadvantaged. (3)

Screening Contacts

At times, patients are diagnosed with TB whilst admitted to a hospital ward. In these situations, the TB nurse seeks advice from infection control about the steps that need to be taken, as other patients in the ward may have been in close contact. Patients in that ward may need a symptoms screen and tuberculosis screen. (13) One reason that nurses are involved in this care could be due to Principle C, by the Royal College of Nurses, stating that they should 'manage risk, are vigilant about risk, and help to keep everyone safe in the places they receive health care.' (14)

TB nurses are involved in contact tracing for close or regular contacts of the patient, due to the risk of them having caught the infection. (15) The nurses work with the consultant to conduct investigations for the patient, and if required, initiate treatment. It is therefore invaluable to have a good relationship with the patient's close contacts, as the contacts' adherence can be more easily achieved if they are diagnosed with TB.

Initiating Treatment and Conducting Reviews

Prior to initiating treatment, TB nurses often consult pharmacists to ensure there are no drug interactions. They will be able to explain the benefits and risks of the treatment with other regular medications or illnesses and advise on what the best course of action would be. (16) For example, when treating patients with both HIV and TB, rifampicin cannot be given with nucleoside reverse transcriptase inhibitors, so the pharmacist can aid in the decision making for this case.

The TB nurse will then implement the management and have regular reviews with the patient (17), to assess adherence to treatment and review any side effects of medication. This includes assessing the health of the patient's eyes if they're on Ethambutol, Voractiv or Isoniazid. (18) Involvement of the eye unit is therefore vital in the treatment. For this reason, many nurses liaise with the eye unit to pre-book appointments for the days when they have TB clinics running, so patients can have their eyes checked on the same day.

The patient's ability to cope with their diagnosis and treatment will also be assessed during a review, and those who are struggling will be referred to the clinical psychologist who will assess the patient's emotion and behaviour. They can reduce their psychological distress by providing therapies such as Cognitive Behavioural Therapy, which has shown to also improve adherence to treatment. (19)

Patient Adherence – Education, Building Relationships and DOT

It is common for patients to not adhere to treatment for tuberculosis, and there are many reasons for this. (20) Adherence may be an issue due to the stigma that is attached to tuberculosis, as it is often associated with people who live with social risk factors, e.g. being homeless, imprisoned or misusing drugs. (21)

TB nurses work with patients in many ways to promote adherence, such as teaching them and their family about the infection. The TB nurses are very knowledgeable and can answer patient and family queries and clarify common misconceptions. Their knowledge is also shared through teaching other healthcare professionals, such as student nurses, medical students and junior doctors, as well as presenting lectures at regional conferences aimed at professionals, such as occupational health staff.

A study conducted in the USA has shown that a nurse case-managed (NCM) programme can improve adherence for latent TB treatment in the homeless. The study had a control group, which used their normal method of care, and a NCM programme, which included other interventions, such as "changing context activities related to self-esteem". (22) One of these interventions was educating the patients about TB. The study found 64% of patients in the NCM programme completed their treatment, with just 42% in the control group. This was a significant increase in adherence for treatment, however, it is difficult to deduce what caused this increase as there were many interventions in this programme.

Another method of increasing adherence to treatment is through building strong relationships with the patient. Some nurses do this by providing their phone number to patients as a point of contact for uncertainties, to ensure there is always someone present to answer questions (23). The nurse-patient relationship is enhanced through the emotional support provided by nurses throughout the treatment, such as breaking down stigma faced from the patient's family. (24) Nurses also provide guidance about the available support groups, such as TB Action Group and The British Lung Foundation, (2) where the patient can share their experiences with other members in similar positions.

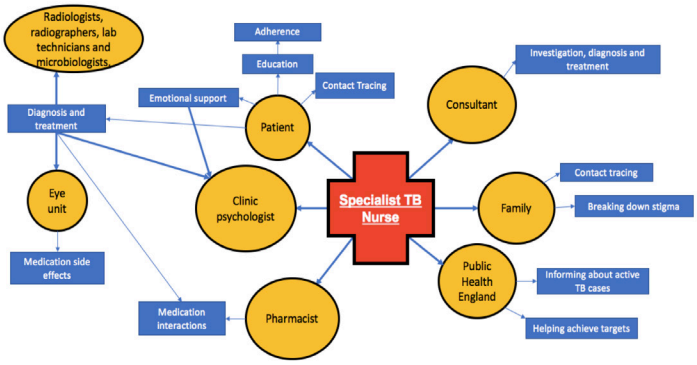
Non-compliant patients with active TB require Directly Observed Treatment (DOT), implemented by the TB nurse, who ensures that patients attend to take their medication. DOT implementation ensures safety for everyone around the patient, by preventing the infection from spreading. It is recommended to use 'the most effective standardized, short-course regimen, and of fixed-dose drug combinations' to prevent drug resistance and improve compliance. (25)

CONCLUSION

This report has marked the importance of the role of tuberculosis nurses in the multidisciplinary team and some of the challenges that may be faced using the MDT approach. The role of the TB nurse is multi-faceted, having to communicate with the entire MDT as required, whilst also remaining the advocate for the patient, who may struggle to cope with the complex team. In such a large team, it is essential for the TB nurse to gather information from different members and communicate effectively with the patient throughout their diagnosis and treatment. The TB nurse is a pivotal part of the team due to the breadth of the skills they showcase - they have the medical expertise to treat the patient, essential communication skills to lead the team, and compassion to be able to care for patients as an individual.

FIGURES

Figure 1: The Importance of the Specialist Nurse in the MDT



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