

How the BMJ Clinical Decision Training Initiative is supporting the diagnosis and management of tuberculosis in Georgia



As part of the Clinical Decision Support Training Initiative with the Ministry of Health, Labour and Social Affairs of Georgia, selected healthcare professionals have had access to BMJ Learning and BMJ Best Practice since October 2016. In this article, Dr Nelly Solomonias and Dr Maia Kipiani from the National Center for Tuberculosis and Lung Diseases (NCTLD) share their views with BMJ on how access will support quick and effective diagnosis of tuberculosis (TB) in Georgia.

About the National Center for Tuberculosis and Lung Diseases

In Georgia, the diagnosis and ongoing management of respiratory disorders has been a long-term issue. The country's first anti-tuberculosis dispensary was founded in 1925 and a new stage in the fight against TB started when the NCTLD was founded in 2000.

Today the NCTLD headquarters manages and controls the National TB Program in Georgia. The NCTLD is also an educational and scientific

research centre, providing continuous professional development (CPD) programs to health professionals in Georgia. The Center is a leading institution and works closely with clinics and research centers in the U.S. and Europe. It is equipped with the latest equipment and medical services according to international standards and offers exchange programs for employees in the field of TB diagnosis and treatment.



The key objectives of the NCTLD are:

- Administration of the National TB Program in partnership with local and foreign governmental and non-governmental organisations
- Provision of high quality diagnosis and treatment of TB patients with all forms of disease
- Management of complications and adverse events during TB treatment
- Surgical treatment of pulmonary and extrapulmonary tuberculosis
- Clinical trials and high quality clinical studies of new anti-tuberculosis drugs and regimens.



A key challenge: timely diagnosis of tuberculosis

One of the biggest challenges for front-line practitioners in Georgia is the early detection of TB presumptive patients as it requires correct differentiation of TB from other diseases with the same symptoms and radiological abnormalities.

Unfortunately, referral of most TB presumptive patients to the NCTLD happens only after prolonged antibiotic therapy or severe complications.



Dr Nelly, who is a TB physician at the Center explains;

“A common example is a patient presenting to their family doctor with general symptoms such as cough or night sweats. They are often diagnosed with a respiratory tract infection or chronic respiratory disease. As their disease progresses, they continue to deteriorate. In some cases, it is not until they have developed acute complications that they are diagnosed with tuberculosis. At this stage the disease will be well advanced and more difficult to treat and there is an increased risk that they will have spread the disease to others. This is also the case for other infectious and respiratory tract diseases.”

A key factor the NCTLD has identified as contributing to delayed diagnosis is that primary care doctors do not always have access to the information they need. Access to international journals and e-resources is limited and language can be a further barrier. In cases such as TB, fast access to clear guidance could make a big difference to the speed in which patients are diagnosed or referred for specialist care.

Clinical decision support and e-learning for primary care physicians will make a big difference

The BMJ Clinical Decision Support Training Initiative, which includes access to BMJ Best Practice and BMJ Learning, provides doctors with evidence-based information to support their decisions.

Structured around the clinical workflow and updated daily, BMJ Best Practice uses the latest evidence-based research, guidelines and expert opinion to offer step-by-step guidance on diagnosis, treatment and prevention of respiratory (and other) diseases.

Dr Nelly explains that BMJ Best Practice supports the local resources by adding an additional international evidence-based perspective;



“When diagnosing respiratory diseases local resources might only recommend spirometry as a test and no other investigations. However, BMJ Best Practice would recommend a comprehensive range of necessary investigations, for example tests for measurement of gas exchange or body plethysmography. Quality measurement of diffusing capacity of the lungs for carbon monoxide (DLco) can help to diagnose and prevent pulmonary hypertension, pulmonary embolism, or heart failure in patients with disseminated, miliary forms of TB, or other chronic respiratory disorders.”

Beyond the clinic, continuous knowledge development is key to improving the health infrastructure in Georgia. There have been widespread efforts from the NCTLD to educate doctors through face-to-face training. However, these programmes have been slow and difficult to scale up.

Practitioners need prolonged access to the newest, evidence-based information to support the creation of appropriate diagnostic algorithms and prescription of adequate treatments. Through the BMJ program, users have access to online e-learning modules from BMJ Learning. These modules support face-to-face training efforts and enable the differentiation of pulmonary TB and other respiratory disorders. Ongoing use of BMJ Learning modules has helped NCTLD’s physicians improve their knowledge and skills in management of rare infectious diseases, mediastinal and pleural disorders, pulmonary embolism, chronic obstructive pulmonary disease and asthma.

In addition, learning activity is automatically tracked to enable certificates to be downloaded as evidence of CPD activity. This has provided motivation for all doctors from NCTLD to use BMJ Learning to regularly access the newest guidelines, evidence based recommendations and best practice.

The long-term application of BMJ Best Practice and BMJ Learning at the National Center for Tuberculosis and Lung Diseases

The BMJ Clinical Decision Support Training Initiative is also helping NCTLD to start to address wider management issues within the health service. Dr Maia, an Epidemiologist at the Center explains;

“BMJ Best Practice and BMJ Learning have already helped us identify where we could provide more cost-effective care, especially in relation to respiratory diseases, and also in certain rare disorders. The new information has helped us to identify a number of diseases that present with the same characteristics. We have needs for the differentiation of diseases such as cancer, Wegener's granulomatosis, Hodgkin lymphoma and TB. BMJ Best Practice and BMJ Learning support us in building the best algorithms with appropriate instrumental and laboratory tests. This has resulted in a more timely and cost-effective diagnosis of the correct disease. In addition, we can now start to work together with program managers on the long-term application of the information and guidelines to plan and manage services for patients with tuberculosis and other infectious and non-infectious diseases.”

Sharing their thoughts on the future directions of the BMJ Clinical Decision Support initiative, Dr Nelly and Dr Maia believe it is crucial for healthcare professionals in Georgia to have long term and continual access to BMJ Best Practice and BMJ Learning;

“We hope the program will continue to grow with more translated content and more users. Doctors in Georgia need ongoing access to evidence-based information.”



Dr Nelly Solomonias has been an educator at Tbilisi State Medical University in tuberculosis, respiratory medicine and pulmonology since 1997. She is also a TB physician at the National Centre for Tuberculosis and Lung Diseases and helps to educate and build the capacities of respiratory professionals and others that are involved with the identification and treatment of TB and other respiratory disorders.



Dr Maia Kipiani is an Epidemiologist based at the National Center for Tuberculosis and Lung Diseases and is involved in various research projects. She collaborates with U.S colleagues on a number of these projects. She is the principal investigator for an ongoing International Science and Technology Center (ISTC) clinical research project focusing on the pharmacokinetics of newly introduced anti-TB drugs.

If you would like to know more about the Clinical Decision Support Training Initiative or would like to share your feedback with BMJ, please email Kate Shanahan, kshanahan@bmj.com