



Improving organisation and communication for better diagnostic and management at Clinic Medical Center in Azerbaijan



Dr Hokuma Mammadova is currently in her fourth year of residency at Azerbaijan Medical University (AMU) and working in the Baku Clinic Medical Center. Like many other doctors, she faces daily challenges at her workplace which include poor organisation of the laboratory and radiological examinations, as well as poor communication between doctors and patients. On the educational side, there is also a limited number of resources available in Azerbaijani that are based on the latest evidence.

We hear from Dr Mammadova to see how things have changed since she started using the BMJ Clinical Decision Support Training Initiative.

I know it is really important that diagnosis and treatment in medicine are conducted in accordance with international protocols. However, doctors need to treat patients, not necessarily just the disease. Therefore, the approach to each patient will be different. This is where challenges may arise when it comes to diagnosis or treatment, given the existence of additional diseases in parallel with the main disease. This is also where BMJ comes in. With BMJ Best Practice and BMJ Learning, doctors can now get help in determining what drugs to give and how these medications should improve clinical outcomes.



Increasing knowledge with BMJ Learning

I use both BMJ Best Practice and BMJ Learning in my daily practice. Through BMJ Learning, I am trying to complete topics and modules not only on infectious diseases, but also in other areas. It is important for me as a young doctor to learn about the case definitions and step-by-step management of patients, criteria for making correct diagnoses, and examinations and investigations to confirm the diagnosis. In the case of infectious diseases it is really helpful to get evidence based knowledge on management - such as empiric antibiotics for initial treatment of infections.



Making the most of the accessibility of BMJ Best Practice

BMJ Best Practice captures my attention even more than BMJ Learning. Since downloading the app to my mobile telephone, I get instant information on various diseases. The best feature is that the app is available offline providing access to the young doctors like us when and where we need it.

I would like to share an example from my daily practice of using this resource. We use the BMJ Best Practice calculators very often, e.g. to calculate creatinine clearance or body mass index. In the past, we were searching for these in various guidelines, but now we can easily enter the indicators into the system and get results quickly.



Using BMJ at work

Over the last two months, we have had an increasing number of patients with meningitis. I went through BMJ Learning and BMJ Best Practice, and collected updated information which enabled us to form a precise diagnosis and apply new treatment methods. As we know, there are different causes of meningitis. I became equipped with the latest information by completing the modules on the diagnosis of bacterial and viral meningitis. The differential diagnosis content was especially helpful. I have even prepared a report about one of the patients. For a doctor, confirmation of the diagnosis is of the most important outcomes to achieve.

Early and accurate diagnosis of infectious disease is important - particularly in meningitis since it may lead to various complications and after-effects (such as hearing impairment and learning disabilities). Therefore, I am trying to make good use of the knowledge obtained from BMJ resources regarding both laboratory and radiological diagnosis.

I would also like to mention that I have acquired knowledge on infections which do not occur in our country e.g. Rift valley fever, melioidosis and South America hemorrhagic fevers. However we see travellers who have returned home and who are unwell. This content becomes very helpful in differential diagnosis.



The importance of evidence-based information

Since medicine itself is a precise field, the diagnosis and treatment of diseases should be based on evidence-based information. Both resources provide methodical recommendations and evidence-based information within an excellent framework. For example, I have recently completed the module on "abnormal liver function tests". I have applied the new knowledge about the diseases contributing to elevated liver enzymes. I found out about the different enzymes and how they might be raised in different diseases - the information was practical and helpful. I sometimes print evidence-based information and share it with my colleagues.

My colleagues are interested in accessing international websites. Every week, we have presentations and discussions. During these meetings, we highlight information and small details we have obtained from BMJ resources and we relate them to patient outcomes. An example of my colleagues' use of BMJ resources is that doctors on the night shift use the medical calculators to get prompt and easy to use information.

Continued access to the resources play a significant role in enhancing our knowledge and constant refreshment of our information. Moreover, besides improving our skills and knowledge, newly published modules enable us to further advance our knowledge.



Patient case study

I would like to share a patient from my practice. A 36-year-old man approached our department with the following complaints: general weakness, itching, fatigue, malaise, nausea, vomiting, right upper abdominal pain and jaundice. He received treatment for various diagnoses in his regional clinic but his condition did not improve. When he reached our clinic, his liver function tests revealed unexplained abnormalities such as raised alanine transaminase and aspartate transaminase. According to the results of the comprehensive initial examination and laboratory tests, I suspected Hepatitis C and turned to BMJ Learning and BMJ Best Practice resources, specifically to modules on "Hepatitis C and "Step by step - diagnosis of hepatitis C in primary care".

The evidence-based guidelines and structured information helped a lot with defining the diagnosis. As the first step we did proper blood testing for the detection of the indicators of viral hepatitis (HBsAg, Anti HCV, and HCV RNA). At the same time, we requested biochemistry and hematology tests, a full blood count and differential, clotting study, and a liver ultrasound. The following was detected: Hepatitis C antibody positive, HCV RNA positive, rising liver function tests, especially alanine transaminase, and a high level of bilirubin in the blood. The results of the examination showed us that the patient had acute hepatitis C.

Then I turned to BMJ Best Practice to identify the treatment plan. Referring to BMJ Best Practice source we checked the genotype of hepatitis C and subsequently selected a treatment scheme with direct-acting antiviral agents like Sofosbuvir + Ledipasvir for 6 weeks. We also provided symptomatic and supportive care. The patient's health condition started improving over the following weeks and the other indicators such as liver function tests and bilirubin all fell back to normal.

In addition, the patient was advised to periodically (every six months for 3 years) have HCV RNA and Anti HCV tests in order to observe the disease.

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