

NIHR Greater Manchester PSTRC

Plain English Publication Summary

Publication: [Assessing the utility of a differential diagnostic generator in UK general practice: a feasibility study](#)

Publication details (Vancouver format)

Cheraghi-Sohi S, Jeffries M, Stevenson F, et al. The influence of personal communities on the self-management of medication taking: A wider exploration of medicine work. *Chronic Illness*. 2015;11(2):77-92.
doi:10.1177/1742395314537841

What are the most important findings/conclusions in this paper? Why are they important?

Differential Diagnosis Tools (DDx) are electronic tools used by healthcare professionals to reach the correct diagnosis of a patient's illness. We looked at one DDx tool, Isabel, and found that it is unlikely to be routinely used in UK General Practice. This is because practitioners felt there was little 'added-value' versus the tools they already used. They believed it took too long to use, and that it potentially affected the relationship between a clinician and a patient.

There has been an ongoing need to test DDx tools in real-world settings and our work helped to increase knowledge in this area. Our study also suggests that more work to test Isabel in UK general practice is not required.

What did you do?

General Practitioners (GPs) and nurse practitioners make lots of diagnoses as part of their daily work. Making the correct diagnosis can be difficult, particularly when patients have many and unusual symptoms. As a result, diagnostic errors can, and do, happen. One potential way to help clinicians reach the correct diagnoses are by using differential diagnosis (DDx) generators.

We tested a DDx tool called Isabel because we wanted to see if it was helpful when diagnosing patient illnesses. We also wanted to know whether practitioners would use it routinely in their work.

Why did you conduct this research?

There is growing evidence which supports the use of DDx tools in clinical practice. However, their use is limited and mainly takes place in the USA and in hospitals. A major report by the National Academies of Science and Medicine (NAM) in the USA called for a test of DDx tools in clinical settings such as general practice, where a patient's multiple and varied symptoms might make it difficult to reach an accurate diagnosis.

We decided to see if it would be practical to introduce a DDx tool into UK general practice and whether practitioners would find it useful.

What was known before your paper was published?

DDx tools have been shown to provide accurate diagnoses. However, there is not much evidence to show that the tools can be used by practitioners during their routine clinical work, or that these tools provide a better diagnosis than the practitioner would reach on their own.

What is next? What is the potential impact of the work in this paper? What will change as a result of this paper (or the study it describes)?

The study was designed to find out whether a larger study would be worthwhile. The results suggested that the DDx tool would not be used routinely in UK general practice, as it was used too few times and not over a long period of time. Therefore, there will not be a wider study of the DDx tool.

In order to improve the likelihood of the tool being used, it would need to be added in to existing software and it might then be used for illnesses that are difficult to diagnose.

Does this paper link in to a particular study / project? If so, please summarise the study and explain how this paper has improved understanding, or will move the study forward.

This work was done as part of the first GM PSTRC in Manchester, which ran from 2012-2017. It was a small study to understand whether we should run a larger study. It showed that the benefits of using the DDx tool were limited and so a larger study was not required.