

Predicting chlamydia/gonorrhoea infections can help to reduce potentially unnecessary testing within an online testing service

Study implications:

- The clinical prediction rule (CPR) we previously developed for predicting chlamydia/gonorrhoea infections at in-person sexual health clinics is valid to use on an internet-based testing service such as GetCheckedOnline.
- When applying this CPR to GetCheckedOnline, lowering the minimum risk score threshold for recommending testing could reduce the number of potentially unnecessary tests while detecting most chlamydia/gonorrhoea infections.
- Further research would be needed on client acceptability and equity considerations prior to implementing the tool.

What is this study about?

Clinical prediction rules (CPRs) are tools that can be used to predict a person's risk of having a sexually-transmitted infection (STI). A CPR can be developed based on a set of demographics, behaviours, and/or clinical characteristics (e.g., age, number of recent sexual partners, previous diagnosis of STIs).

At present, GetCheckedOnline, BC's internet-based testing service, routinely recommends chlamydia and gonorrhoea tests to all users, including frequent testers who may have recently tested for these infections, or users who may have a low risk. We can use CPRs to recommend testing to only those with a higher risk of infection, to reduce potentially unnecessary testing and improve how we use our resources.

We previously developed a CPR for use at in-person sexual health clinics that can detect 91% of chlamydia and/or gonorrhoea (CT/NG) infections while reducing testing by 32% among women and heterosexual men with no symptoms. For this study, we wanted to evaluate how this CPR might impact testing recommendations within GetCheckedOnline.

What did we find?

When we applied the CPR to the GetCheckedOnline population, total scores ranged from -2 to 25. If we only offered testing to those with a minimum total risk score of 6 (as recommended in our previous study), we would only detect 82% of infections while reducing testing by 34%.

However, **if we lowered the threshold and offered testing to individuals with total scores ≥ 4 , we would detect 97% of CT/NG infections and reduce the number of tests needed by 14%.**

What did we do?

We analyzed GetCheckedOnline clinical and laboratory data from Oct 2015-Jun 2019. For every completed test episode, we assigned a risk score according to the CPR. A higher score indicates a higher risk of CT/NG infections. Using different risk score cut-offs for recommending testing, we calculated the proportion of CT/NG infections we would detect and the proportion of tests we would reduce.

	When CT/NG testing is recommended to...		
	All users	Users with a total CPR risk score of ≥ 4	Users with a total CPR risk score of ≥ 6
% of CT/NG infections detected	100%	97%	82%
% reduction in total tests offered	N/A	14%	34%

Summarized from article: Ablona, A., et al.. Validation of a clinical prediction rule to predict asymptomatic chlamydia and gonorrhoea infections among internet-based testers. Sexually Transmitted Diseases. doi: 10.1097/OLQ.0000000000001340