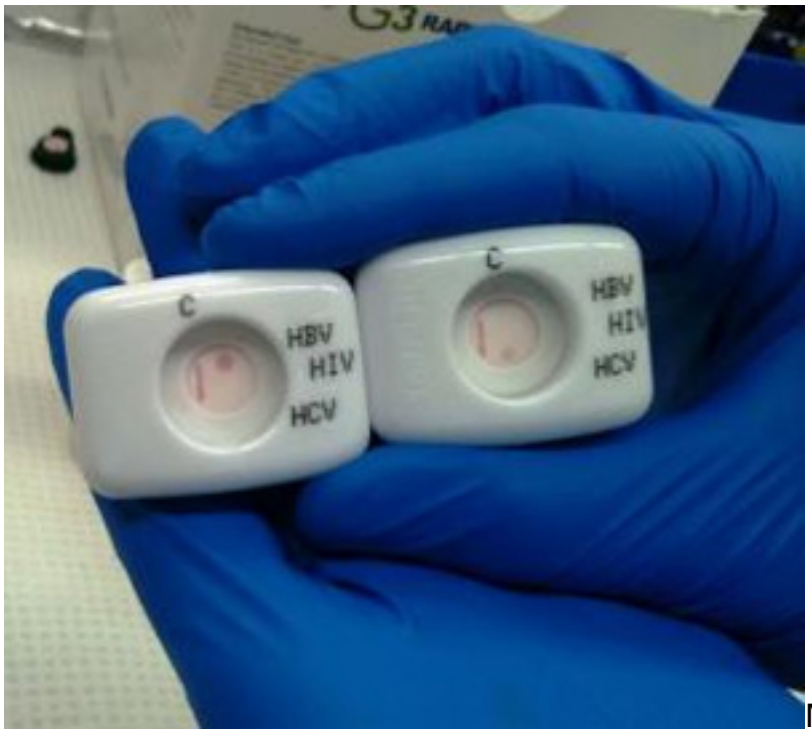
New Rapid & Point-of-Care Hepatitis C Tests Could Be Global Game Changers

McGill University Health Centre



Montreal October 16, 2012 – Timely screening and diagnosis is critical to the success of new treatments and ultimately to the survival of hepatitis C patients.

A new study led by the Research Institute of the McGill University Health Centre (RI MUHC) is the first to show that hepatitis C rapid and point of care tests with a quick turnaround time are highly accurate and reliable as conventional first-line laboratory tests. This head-to-head analysis, published in the current issue of the Annals of Internal Medicine, will lead to changes in screening practices and ultimately impact the control of hepatitis C infection worldwide.

"We were able to determine that point-of-care and rapid tests in oral fluids and blood ranged in accuracy from 97 to 99 per cent, which is significant," says senior author, Dr. Nitika Pant Pai, Assistant Professor in the Department of Medicine at McGill University and clinical researcher at the RI MUHC. "With their quick turnaround time and convenience we can now use these tests to screen many patients worldwide."

Although conventional lab testing is in place in developed countries, it is available only to those who visit community clinics and specialized hospitals and have a risk profile, or symptomatology, that warrant screening. Typically, results are available within a week, but may only be communicated to the patient during their next visit, which may be one to three months later. Delays like this may result in reduced patient follow-up and potentially impact transmission of the virus in the community.

Accurate and reliable point-of-care tests and rapid tests offer an alternative to standard tests. "First generation point-of-care tests are convenient, effective and informative for clinical decision making," explains Dr. Pant Pai. "These tests usually don't require specialized equipment, they can provide results within 30 minutes, or maximally within one patient visit or one working day, and many do not require electricity," adds Sushmita Shivkumar, lead author of the study and a medical student at McGill University.

More than 170 million people are infected with hepatitis C worldwide due to unsafe blood transfusion, injection drug use and unsafe therapeutic injections. Hepatitis C and HIV co-infections contribute substantially to disease burden in North America, but the affect of the disease is highest in Africa and Asia. "With promising oral drugs for Hepatitis C on the horizon, accurate and reliable point-of-care and rapid tests will allow millions of infected individuals worldwide to be diagnosed and treated," explains the study's co-author Dr. Rosanna Peeling, Professor and Chair of Diagnostics Research at the London School of Hygiene & Tropical Medicine.

"These tests have the potential to be game changers on a global scale, particularly where first line conventional laboratory based testing is not financed by under-resourced health systems," concludes Dr. Pant Pai. "It is now time to optimize their potential by integrating them in routine practice settings."

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About this study: The study, Accuracy of rapid and point-of-care screening tests for hepatitis C: A systemic review and meta-analysis, was authored by Sushmita Shivkumar (Clinical Epidemiology and McGill Medical School); Rosanna Peeling (London School of Hygiene and Tropical Medicine, UK); Yalda Jafari (Clinical Epidemiology, Department of Medicine, MUHC); Lawrence Joseph (McGill University/ RI MUHC) and Nitika Pant Pai (McGill University/RI MUHC).

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