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Is it cost effective to pool donations for nucleic acid testing for HCV screening in blood banks from high prevalence communities?

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Blood transfusion may transmit infections with serious consequences such as Hepatitis C virus (HCV). Blood banks worldwide are shifting to nucleic acid testing (NAT) for effective screening of blood donations for HCV and HIV. Since viremia precedes seroconversion by several weeks, tests that detect viral nucleic acids are more sensitive than serology and may reduce the window of infectivity by as much as 50 to 60 days for HCV. However, this has not yet been adopted nationwide in Egypt due to financial constraints. Egypt currently has the highest prevalence of HCV. Testing of pooled donor samples significantly reduces the number of tests required on a daily basis, the time to perform the testing, and the cost of testing per donation. The rise of HCV in plasma is very rapid, thus sample dilution inherent in pooling has a minimal impact on the sensitivity to detect window period viremic samples. Pooling samples makes molecular-based testing of blood donors feasible. The current study evaluates pooling schemes in a cohort of 12,000 donations to validate the possibility of avoiding the deleterious effects of transmitting HCV while maintaining cost effectiveness.

Biography

Manal M Baddour has completed her PhD in Alexandria University as a joint project with NAMRU-III. She is a Professor of Medical Microbiology and Immunology, director of the Diagnostic Microbiology Lab in Alexandria University, a Microbiology Consultant for 3 diagnostic hospital labs & Editorial board member of 3 international Journals. She has published a book and more than 29 papers in reputed journals. She has shared as PI or co-investigator in many research projects in Egypt and Saudi Arabia and supervised 17 Master and PhD theses. She takes interest particularly in HCV and MRSA.

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