Northampton General Hospital
NHS Trust

Implementation of Core Tests ComboResp Lateral Flow Test for the point-of-care detection of Influenza A/B, COVID-19 and RSV

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Aims and objectives

To determine the impact of the introduction of ComboResp Lateral Flow Assay for the detection of Influenza A/B, COVID-19 and RSV in acute care, admissions and paediatric wards of a district general hospital.

Introduction

Respiratory viral infections are a common cause of morbidity, mortality and hospital admission worldwide and are a leading cause of nosocomial pneumonia hospital patients. In 2023-2024 10.5% of acute respiratory infection incidents were identified in hospital settings of which 53.3% were attributable to COVID-19, 35.5% Influenza and 5.1% Respiratory Syncytial Virus (RSV) (1).

The prompt diagnosis of respiratory viral infections is critical for the timely administration of antiviral treatments and prophylaxis, and the provision of prompt infection prevention and control measures.

The introduction of point-of-care tests for the detection of respiratory viruses has revolutionised the diagnosis and management of patients with respiratory infection providing rapid, sensitive detection of common respiratory viral pathogens.

Core Tests ComboResp Lateral Flow Test

The Core Tests ComboResp Lateral Flow assay is an immunochromatographic test which permits the qualitative and differential detection of Influenza A, B, COVID-19 and RSV in nasal swab specimens from symptomatic and asymptomatic patients in 15 minutes.

The assay is simple to perform and interpret and can be utilised as a point-of-care test outside of a clinical laboratory setting. The ClearScreen reader technology aids in result interpretation and provides full traceability of results.

The Core Tests ComboResp Lateral Flow assay was compared against the Abbott ID NOW COVID-19, Influenza A & B and RSV assays to determine sensitivity and specificity, utility and cost-effectiveness.

Results

The combined performance of the Core Tests ComboResp Lateral Flow assays for all 4 targets yielded 92% sensitivity and 100% specificity when compared to the Abbott ID NOW assays. Cost savings through the implementation of the lateral flow device in the Paediatric Assessment Unit, Emergency Department and Oncology Emergency Assessment Bay are estimated yield savings of approximately £30,000 per annum.

"The lateral flow device has had a profound impact on patient flow and allowed patients to be discharged on treatment rather than be admitted. This has had an impact on reducing bed days and the opportunity for further outbreaks"

Staff Nurse, ED NGHT

"The use of a single swab for the simultaneous detection of Flu, COVID and RSV has significantly improved patient comfort"
Advanced Nurse Practitioner, Paediatrics NGHT

		Abbott ID NOW		
		Positive	Negative	Total
ComboResp	Positive	11	0	11
	Negative	1	50	51
	Total	12	50	62
	Sensitivity	92%		
	Specificity	100%		
	Total agreement	98.39%		

Figure 1. Core Tests ComboResp test performance Vs Abbott ID NOW

"Switching from an expensive molecular method for the detection of respiratory viruses to lateral flow device has yielded significant cost savings for the hospital trust"

POCT Manager, NGHT

"Automated reading and result interpretation using the ClearScreen reader has provided ease and standardisation in the interpretation of test results"

Trainee Clinical Scientist, Microbiology

References

1. UK Government. UKHSA Official Statistics: Surveillance of influenza and other seasonal respiratory viruses in the UK, winter 2023 to 2024. www. Available at: https://www.gov.uk/government/statistics/surveillance-of-influenza-and-other-seasonal-respiratory-viruses-in-the-uk-winter-2023-to-2024/surveillance-of-influenza-and-other-seasonal-respiratory-viruses-in-the-uk-winter-2023-to-2024

2. Sterilab Services. CoreTests ComboResp Lateral Flow Test Brochure 2023