DIAGNOSTIC ACCURACY OF RAPID ANTIGEN TEST IN DETECTING SEVERE ACUTE RESPIRATORY SYNDROME CORONAVIRUS 2 (SARS-COV-2) INFECTION.

Jill J. Jaime, MD | Raymundo W. Lo, MD, FPSP | Farrah Kristine F. Santiago, MD, FPSP

PHILIPPINE CHILDREN'S MEDICAL CENTER

INTRODUCTION

Improving the means to detect SARS-COV-2 infection is important in the ongoing battle against the COVID-19 pandemic. STANDARD™ Q COVID-19 Ag Test offers an easy to use, cheap and rapid way of testing that must be evaluated first to optimize its utility.

OBJECTIVE

This study aims to evaluate the diagnostic accuracy of this test kit compared with Reverse Transcription Polymerase Chain Reaction (RT-PCR) for SARS-COV-2 diagnosis.

METHODOLOGY

Using a retrospective cross-sectional study, seventy seven (77) nasopharyngeal swabs in viral transport media were used to determine the sensitivity, specificity, positive predictive value and negative predictive value of STANDARD™ Q COVID-19 Ag Test compared with the reference method, RT-PCR.

RESULTS

Among all participants, the rapid antigen test has a sensitivity of 9.86%, specificity of 100%, positive predictive value of 100%, and negative predictive value of 8.57%. The sensitivity increases among symptomatic participants and when Ct value is less than 20 to 25.00% and 31.58%, respectively.

Table 1. Summary of the diagnostic accuracy of Rapid Antigen Test compared with RT-PCR

STANDARD™ Q COVID-19 Ag vs RT-PCR	Sensitivity	Specificity	Positive Predictive Value	Negative Predictive Value
Overall	9.86%	100%	100%	8.57%
Among symptomatics	25.00%	100%	100%	16.00%
Ct<20	31.58%	100%	100%	31.58%

CONCLUSION AND RECOMMENDATION

Despite the low sensitivity, STANDARD™Q COVID-19 Ag Test has a high specificity and positive predictive value and could be a cheap and efficient test in the proper clinical context. Its use in conjunction with RT-PCR for those who tested negative initially should be emphasized in the implementation of the existing policies.