Real World Evidence: Economic Assessment of the Impact of Q1-like Infectious Bronchitis Variant in a Broiler Productive Zone in Peru

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Infectious Bronchitis Virus (IBV) is known to cause mild to severe respiratory signs in poultry. In Peru, IBV is present since late 1960s, and IBV variants were detected since 2009 in poultry farms with severe respiratory and renal lesions. Previous epidemiological studies have shown the presence of a diversity of variants in the Peruvian territory, with the Q1-like being the predominant one. In Peru, vaccination against IBV is performed in 100% of hatched broilers, however the only approved serotype is Massachusetts, which confers limited protection against the actual Peruvian IBV field challenge. Birds vaccinated with Mass-type vaccines that experience field challenge with variant strains of IBV, may present a variety of clinical sings or develop a subclinical infection. This subclinical infection underestimates the real impact of IBV in the poultry industry because in these challenged flocks (that generally express lower performance) IBV usually stays undetected. Finally impacting the economic benefit of the company. Therefore, the objective of this study was to monitor IBV in a poultry production zone during a specific period of time and compare the performance of challenged vs non-challenged flocks, to determine the economic impact of IBV variants in Peru. Monitoring was performed with serology at slaughter age, qRT-PCR of cloacal swabs at 35 days of age and sequencing of positive samples. For data analysis, statistics and data visualization Python software was used, and for the assessment of the economic impact “Ceva Calculator” software was used. Our results show that IBV variants economically impact broilers production in Peru.