Cost Effectiveness Comparison of a Dry Powder Inhaler to a Metered Dose Inhaler plus Valved Holding Chamber based on an In-Vitro Drug Delivery Model

M. Nagel¹, J. Suggett¹, A. Ellery¹   ¹Trudell Medical International – London, ON, Canada

BACKGROUND

• In a previous study, healthy participants were asked to inhale from either a dry powder inhaler (DPI) or metered dose inhaler (MDI) + valved holding chamber (VHC). Results indicated that differing amounts of medication could be available to the lungs, depending on the delivery system used.¹

OBJECTIVE

• To compare the relative cost of using a DPI and an MDI+VHC to deliver budesonide/formoterol (BUD/F; Symbicort†) in patients for whom low-dose ICS maintenance therapy is appropriate

METHODS

• Comparisons were based on BUD/F 200/6μg twice daily with yearly cost inputs of £336 for the DPI and £336 + 5.2 for the MDI + VHC obtained from a relevant source in the United Kingdom (www.rightbreathe.com). Drug delivery data was taken from the aforementioned lab study.

RESULTS

• Results: The mass (μg) of Budesonide and Formoterol delivered per £ are reported below.

CONCLUSION

• From a UK perspective, BUD/F delivered via an MDI + VHC offers an economic benefit for the treatment of patients with mild asthma. Further analysis is required to determine if there would be any quality-adjusted life-year (QALY) effects based on the chosen intervention.

1Nagel M et al. Am J Respir Crit Care Med 2020;201:A4763