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Further considerations on normative data for multiple breath washout outcomes

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The magnitude of change on multiple breath washout indices between software versions should be considered. This is particularly true for preschool subjects and those impacted by flow-dependent synchronisation issues. <https://bit.ly/2P02VMu>

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To the Editor:

Multiple breath washout (MBW) equipment's rapid evolution following published technical standards [1, 2] has led to validation of several commercial devices. Desire for greater accuracy in younger ages has driven recent advances, given that in cystic fibrosis (CF) lung function impairment develops early [3]. Software update potential to change MBW indices is recognised [4], but the magnitude of effect depends on the nature of the changes involved. The 2013 inert gas washout consensus statement recommended that "responsibility for commercial system validation and ongoing reliability of system performance should lie with the manufacturer" but that "close vigilance by the end user is essential". The reference functional residual capacity (FRC) and lung clearance index (LCI) data recently published for school-aged children, using Spiroware version 3.2.1 [5], is an important addition to the literature. It highlights the value of interested research groups consolidating data in this manner [6].