

Drug delivery from a Metered Dose Inhaler (MDI) / Spacer delivering triple therapy and self-reported observations from COPD patients following the introduction of a Spacer

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S U M M A R Y

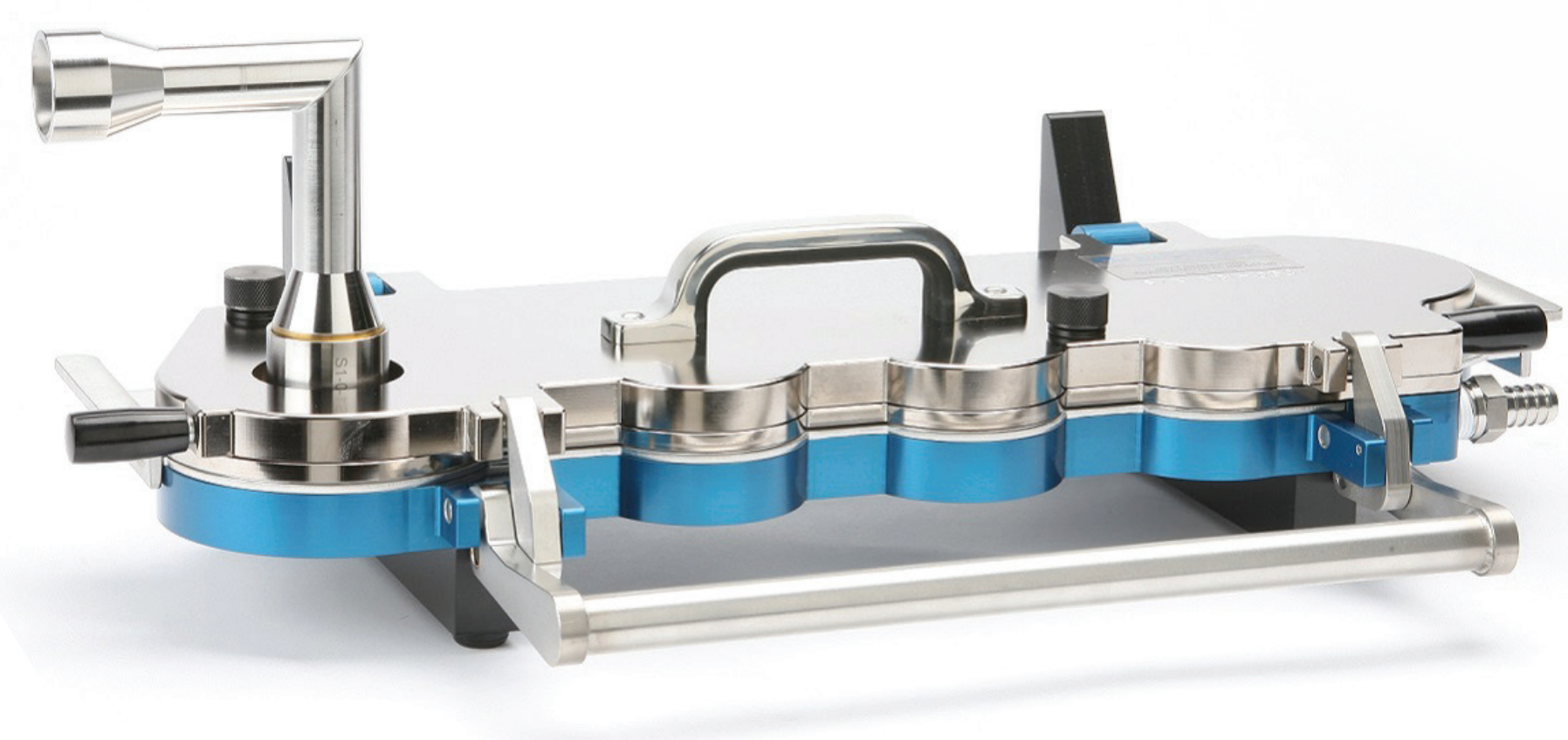
A properly designed spacer should consistently deliver the intended dose while significantly reducing coarse particle dose. In doing so, improved outcomes have been reported by COPD patients.

OBJECTIVE

- This lab study aimed to assess the drug delivery of a COPD triple therapy MDI with spacer, and seek feedback from COPD patients who were using MDIs with a specific spacer.

METHODS

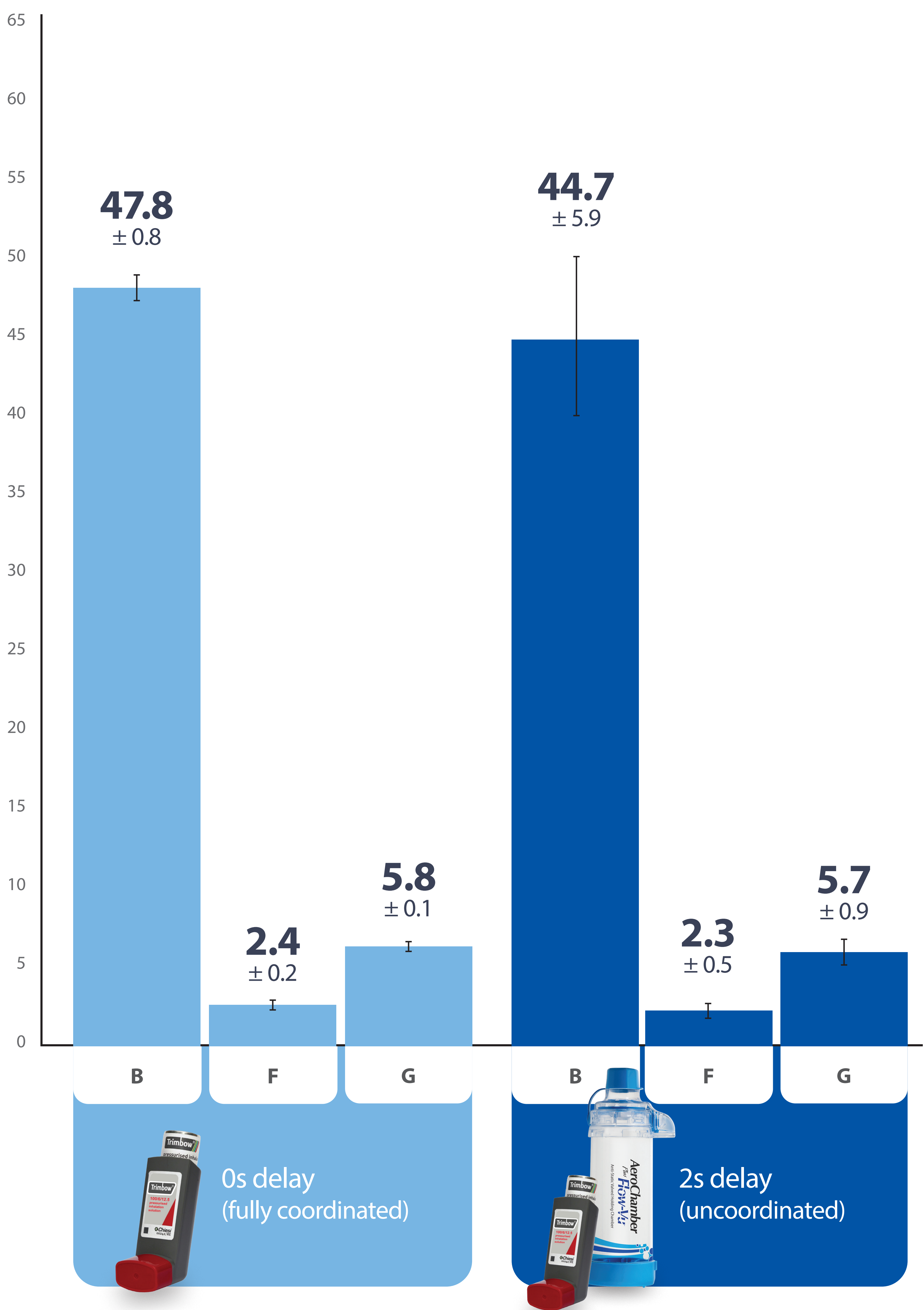
- Cascade Impactor testing was performed using Trimbow[†] beclomethasone dipropionate/formoterol fumarate/glycopyrronium bromide (B/F/G 100/6/12.5 mcg/actuation) pMDI, delivered 0s after actuation, simulating perfect but unlikely coordination.
- A more realistic 2s delay (to simulate misuse) was investigated for the MDI with Spacer (**AeroChamber Plus[®] Flow-Vu[®]** Spacer).
- Fine Particle Mass ($\mu\text{g} < 4.46\mu\text{m} \pm \text{sd}$) and Fine Particle Fraction($\% < 4.46\mu\text{m} \pm \text{sd}$) were assessed.
- Patient feedback data was received from 437 COPD patients from a voluntary UK/Canada database (**myAERO[®]**) comparing the main differences they experienced when using the Spacer with a pMDI compared to pMDI alone.



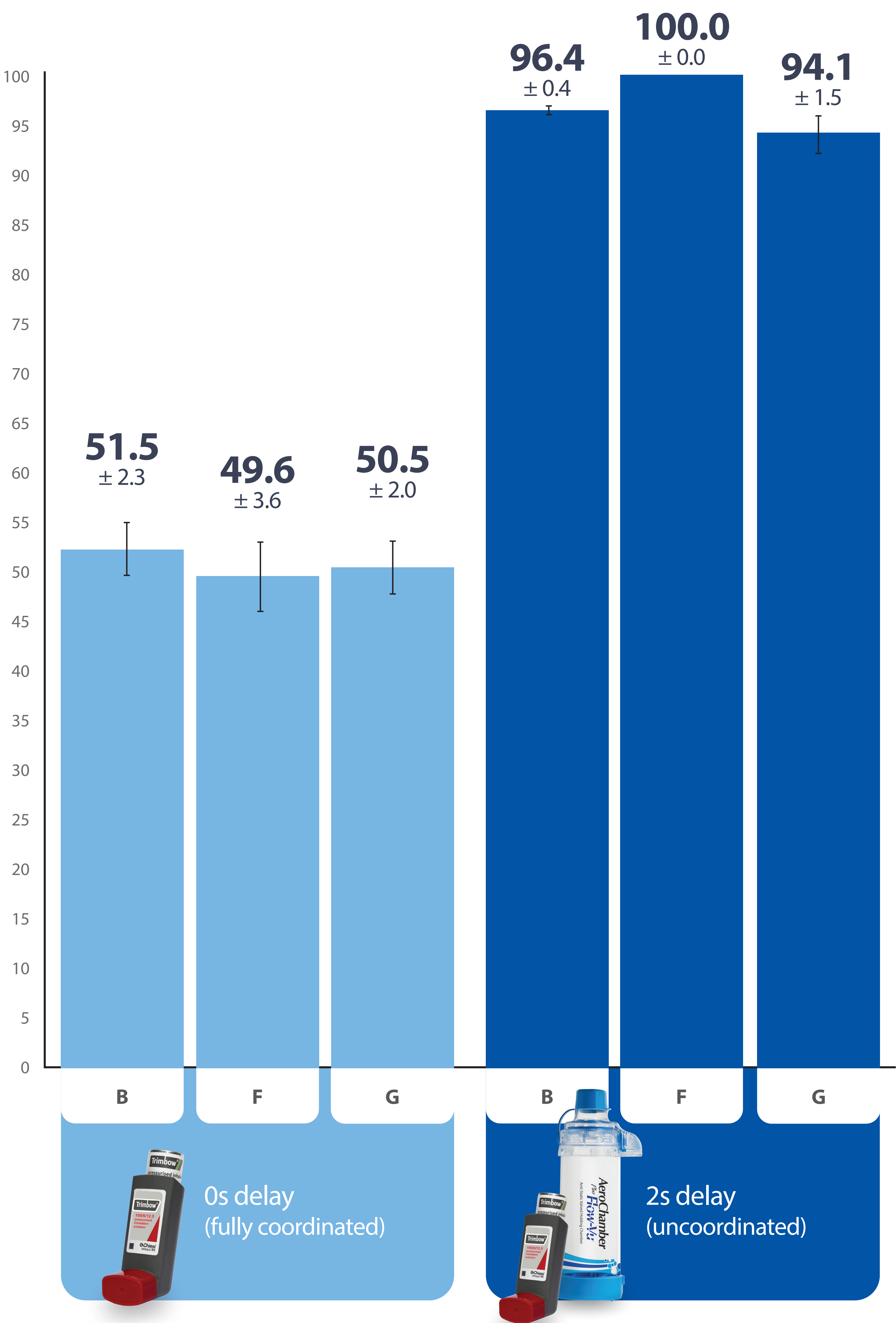
RESULTS




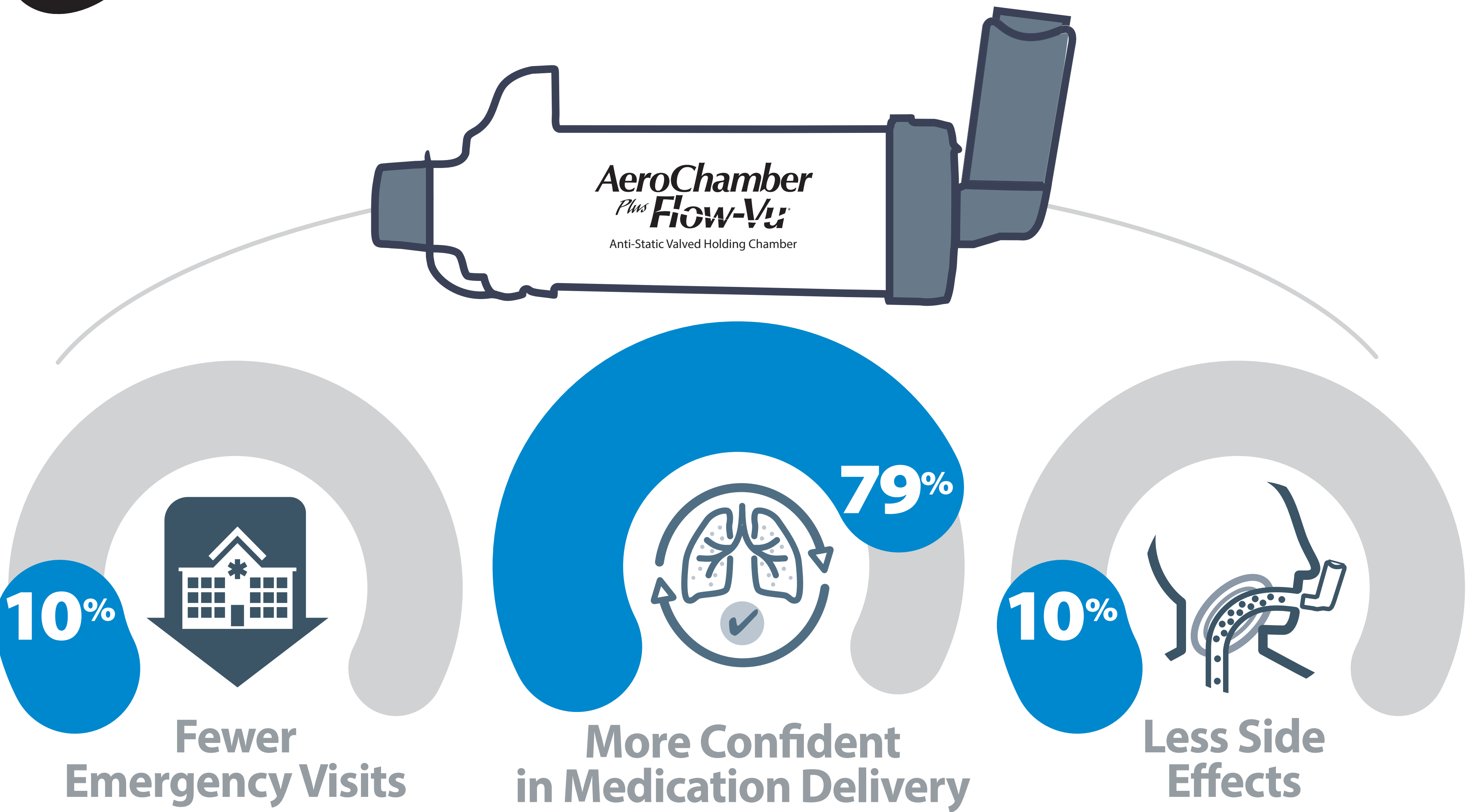
Fine Particle Mass (μg)



Fine Particle Fraction %



myAERO  **437**
RESPONDENTS



CONCLUSIONS

- These results suggest that the Spacer tested can enable effective MDI drug delivery, providing consistent delivery of the intended dose (even with poor coordination) and maximize fine particle delivery.
- The COPD patients surveyed provided positive feedback relating to confidence in medication delivery and some also reported less emergency visits / side effects.