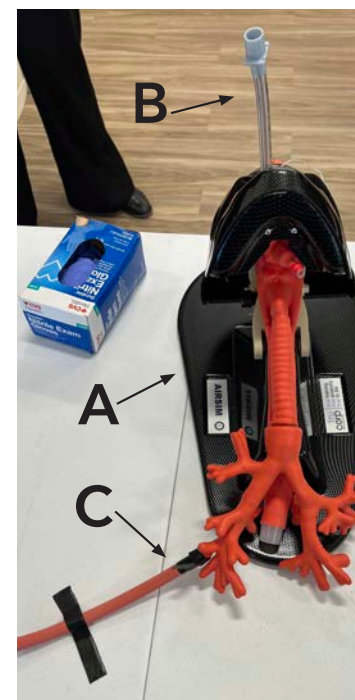


USER SATISFACTION AND EASE OF USE OF SINGLE-USE BRONCHOSCOPES FOR BRONCHOALVEOLAR LAVAGE

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INTRODUCTION

Bronchoalveolar Lavage (BAL) is a minimally invasive procedure that utilizes sampling of the lung by flushing sterile saline into an area of interest, and subsequently suctioning the solution for analysis. While this procedure has been a standard of care in pulmonology for nearly 50 years, evaluation of specimen collection and techniques, specifically within single-use flexible bronchoscopes (SUFB), has not been assessed. The purpose of this study was to evaluate BAL performance of the latest generation of SUFBs.



A) Low Fidelity Lung Model
 B) Intubation Tube
 C) Reservoir

METHODS

Seven interventional pulmonologists performed two bronchoalveolar lavages (BALs) on low fidelity lung models to evaluate five SUFBs

- SUFBs used:
 - Ambu aScope 5 Broncho
 - Ambu aScope 4 Broncho
 - Boston Scientific Exalt-B
 - Olympus H-SteriScope
 - Verathon B-Flex
- Ambu scopes used an integrated sampling system while the others used a Lukens trap
- After BAL completion with each scope, each participant answered a nine-question survey evaluating scope performance (1 = unacceptable, 3 = satisfactory, 5 = excellent)

DISCUSSION

- All but one SUFB was rated as satisfactory for BALs
- The aScope 5 rated highest amongst all users across all categories measured
- Integrated sampling systems may provide clinicians an easier and more efficient tool to perform BALs
- Additional studies should continue to evaluate the difference in these scopes with a larger sample size including clinicians from different backgrounds

CONCLUSION

The analysis showed that SUFBs may be a viable alternative to RFBs for performing BALs. Additionally, SUFBs with integrated sampling systems, such as the aScope 4 and 5, may provide clinicians with an easier and preferred tool for performing BALs and may allow them to perform BALs more efficiently and safely, without the need for additional staff.

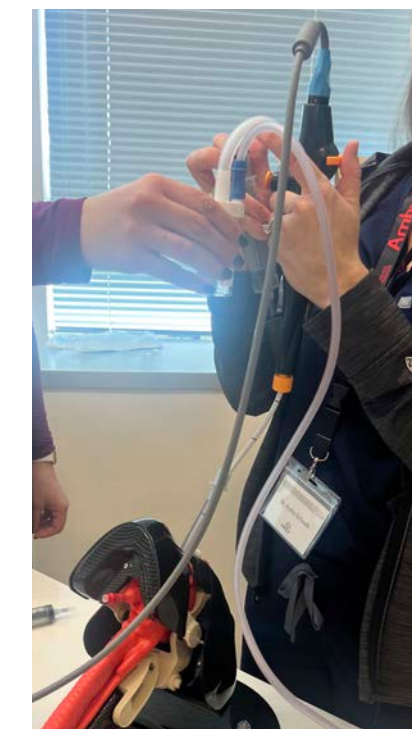
RESULTS

Average Rating of Single-Use Bronchoscope Metrics

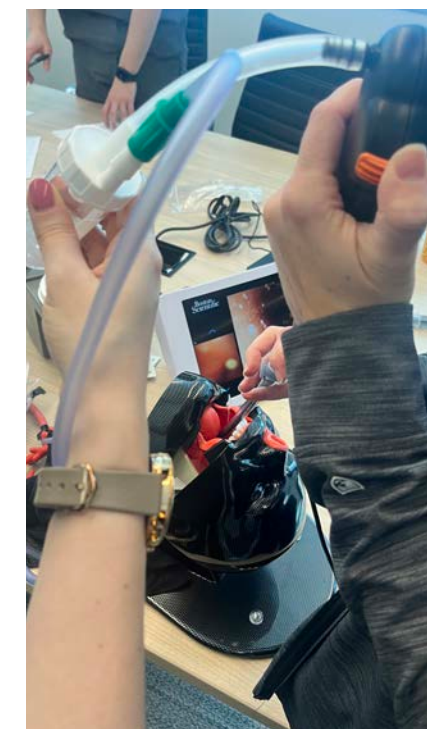
Survey Question	Ambu aScope 5	Ambu aScope 4	Boston Scientific Exalt-B	Olympus H-SteriScope	Verathon B-Flex
Overall comfort/ergonomics during sampling	4.7	4.1	4.0	3.4	3.0
Overall ease of use (start to finish)	4.9	4.1	3.9	3.1	2.4
Overall ease of set up (connections)	4.7	4.4	3.0	3.0	2.6
Overall ease of sample collection	5.0	4.7	3.9	3.3	3.0
Comfort of sampling without assistance	5.0	4.7	2.7	2.4	2.1
Comfort of sampling with assistance	5.0	4.9	4.3	3.9	3.6
Perceived safety of sampling	4.9	4.7	4.0	3.7	3.4
Satisfaction of sampling	5.0	4.3	4.1	3.4	2.9
Overall sampling assessment/score	5.0	4.4	3.7	3.0	2.7
Average	4.9	4.5	3.7	3.3	2.9



BAL with integrated sampling system



BAL with Lukens trap



Sample collection for BAL with Lukens trap