Cite this as: Tingting SHENG, Xin WU, Li CEN, Ye LU, Chenying ZHOU, Qing GU. Potential effects of aerosol generation and transmission during bedside endoscope cleaning[J]. Journal of Zhejiang University Science B, 2024, 25(7): 628-632.
http://doi.org/10.1631/jzus.B2300552

Potential effects of aerosol generation and transmission during bedside endoscope cleaning

Key words: Endoscopy, Aerosol transmission, Bedside endoscope precleaning

JZUSB

Research Summary

This research aimed to identify the characteristics of aerosol generation and transmission during bedside endoscope cleaning and verify the safety and effectiveness of resealable bags in preventing aerosol transmission.



Innovation points

- **Quantified** aerosols in bedside preconditioning procedures using a particle counter to obtain accurate aerosol measurements.

- **Established** a three-dimensional aerosol dissemination model.

- **Demonstrated** the safety and effectiveness of resealable bags in preventing aerosol transmission is very high.

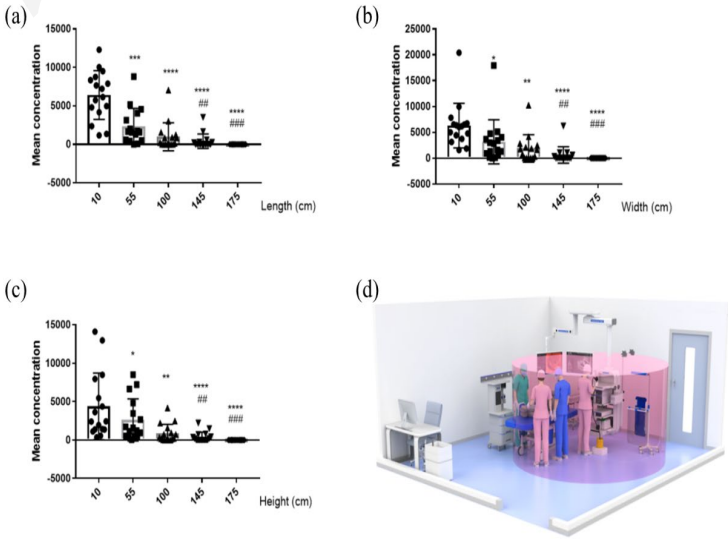


Figure 1

JZUSB

Innovation points

One comprehensive figures and one table were generated to summarize the aerosol dissemination in three dimensions during bedside precleaning procedures.

Figure 1.a-b | Aerosol dissemination at different horizontal distances from the precleaning bucket liquid surface.

Figure 1.c | Aerosol dissemination at different vertical distances from the precleaning bucket liquid surface.

Figure 1.d | Schematic diagram of aerosol dissemination during bedside precleaning procedures.

Table 1 | The scope of aerosol transmission measured in three dimensions during endoscope precleaning procedures.

JZUSB