

**Interpretation IC 170-2017-12 of
ANSI/ASHRAE/ASHE Standard 170-2017
Ventilation of Health Care Facilities**

Date Approved: January 26, 2021

Request from: Justin Opperman, Mayo Clinic, 200 First Street SW, Rochester, MN 55901.

Reference: This request for interpretation refers to the requirements in ANSI/ASHRAE/ASHE Standard 170-2017, Section 7.1a.1, Table 7.1 and Section 7.4.1, regarding pressurization scheme for operating rooms.

Background: Section 7.1a.1 requires “Design of the ventilation system shall provide air movement that is generally from clean to less-clean areas.”

Table 7.1, in the Operating room line item, requires a “Positive” pressure relationship to adjacent areas. Also, in the Clean workroom and Sterile storage room line items, it requires a “Positive” pressure relationship to adjacent areas.

Section 7.4.1 requires that operating rooms “...shall be maintained at a positive pressure with respect to all adjoining spaces at all times.”

Some facilities are designed with a number of operating rooms arranged around a central sterile core which functions similar to a remote sterile processing department. Patient contaminated case carts go to a local decontamination room and then enter the sterile core to get sterilized, packed, and stored either on shelving or prepared on case carts. Staff in the sterile core are dressed just like staff in the operating rooms.

The practice considers the sterile core area to be the most clean space because sterile equipment flows from this central area into each of the surrounding operating rooms. Additionally, it only sees clean and sterile equipment and packaging, whereas the operating rooms do see contamination from patients and staffing flow. The sterile core area would be the most restricted space from a personnel standpoint.

This approach aligns with requirements found in AORN perioperative standards for operating room personnel and airflow as well as AAMI standards for sterile processing areas.

Interpretation: Since the sterile core area is considered the most clean space, air should flow from the sterile core area into each operating room and then into the corridors.

Question: Is this interpretation correct?

Answer: No.

Comments: The standard does indicate that the ventilation system shall provide air movement that is generally from clean to less-clean areas. However, the standard also indicates specific areas with a pressurization that is intended to ensure this for a particular space use.