



**BSR/ASHRAE/ASHE Addendum s  
to ANSI/ASHRAE/ASHE Standard 170-2021**

**Public Review Draft**

**Proposed Addendum s to  
Standard 170-2021, Ventilation of  
Health Care Facilities**

**Second Public Review (February 2025)  
(Draft shows Proposed Independent Substantive Changes  
to Previous Public Review Draft)**

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**(This foreword is not part of this standard. It is merely informative and does not contain requirements necessary for conformance to the standard. It has not been processed according to the ANSI requirements for a standard and may contain material that has not been subject to public review or a consensus process. Unresolved objectors on informative material are not offered the right to appeal at ASHRAE or ANSI.)**

## **FOREWORD**

*Proposed Addendum s revises portions of Sections 7 & 8 to provide clarity of intent and/or correlate elements (indicated below) of the current standard. Addendum s also follows the continuing maintenance process in further coordination with the FGI Infection Preventionist team and 170 committee to result in a coordinated document for use by all stakeholders in the Healthcare Community.*

*This proposed addendum consists of the following general edits:*

- *Add footnotes to Examination type spaces in table 7-1, 8-1, and 8-2 regarding patients with undiagnosed gastrointestinal symptoms, undiagnosed respiratory symptoms, or undiagnosed skin symptoms..*

***[Note to Reviewers: This public review draft makes proposed independent substantive changes to the previous public review draft. These changes are indicated in the text by underlining (for additions) and strikethrough (for deletions) except where the reviewer instructions specifically describe some other means of showing the changes. Only these changes to the current standard are open for review and comment at this time. Additional material is provided for context only and is not open for comment except as it relates to the proposed changes.]***

## **Addendum s to 170-2021**

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***Revise Table 7-1, Table 8-1 and Table 8-2, and related notes as shown below. The remainder of these tables are unchanged.***

BSR/ASHRAE/ASHE Addendum s to ANSI/ASHRAE/ASHE Standard 170-2021, *Ventilation of Health Care Facilities*  
 Second Independent Substantive Change Public Review Draft

**Table 7-1 Design Parameters—Inpatient Spaces**

Function of Space (ee)	Pressure Relationship to Adjacent Areas (n)	Minimum Outdoor ach	Minimum Total ach	All Room Air Exhausted Directly to Outdoors (j)	Air Recirculated by Means of Room Units (a)	Unoccupied Turndown	Minimum Filter Efficiencies (cc)	Design Relative Humidity (k), %	Design Temperature (l), °F/°C
<b>NURSING UNITS AND OTHER PATIENT CARE AREAS</b>									
Cesarean Delivery Room (FGI 2.2-2.9.11.1) (m), (o)	Positive	4	20	NR	No	Yes	MERV-16 (hh)	20-60	68-75/20-24
Operating/surgical cystoscopic rooms (FGI 2.2-3.4 & Table T2.2-2; also see Class 3 Imaging) (m), (o)	Positive	4	20	NR	No	Yes	MERV-16 (hh)	20-60	68-75/20-24
<b>DIAGNOSTIC AND TREATMENT</b>									
ECT procedure room (FGI 2.2-2.12.4.1 & 2.5-3.4)	NR	2	4	NR	NR	Yes	MERV-8	Max 60	72-78/22-26
Gastrointestinal endoscopy procedure room (FGI 2.2-3.11.2 & Table 2.2-1) (x)	NR	2	6	NR	No	Yes	MERV-8	20-60	68-73/20-23
General examination room (FGI 2.1-3.2) (aa)	NR	2	4	NR	NR	Yes	MERV-8	Max 60	70-75/21-24
Hydrotherapy (FGI 2.1-8.4.3.9)	Negative	2	6	NR	NR	Yes	MERV-8	NR	72-80/22-27
Instrument processing room (FGI 2.2-3.11.4)	Negative	2	10	Yes	No	No	MERV-8 (gg)	NR	NR
Medication room (FGI 2.1-2.8.8.2[1])	NR	2	4	NR	NR	Yes	MERV-8	Max 60	70-75/21-24
Nuclear medicine hot lab (FGI 2.2-3.4.8.22)	Negative	NR	6	Yes	No	Yes (ff)	MERV-8	NR	70-75/21-24
Physical therapy (FGI 2.2-2.13.8.16 & 2.6-3.1)	Negative	2	6	NR	NR	Yes	MERV-8	Max 65	72-80/22-27
Treatment room (FGI 2.2-3.1.2.4)	NR	2	6	NR	NR	Yes	MERV-8	Max 60	70-75/21-24

**Informative Notes:** (1) NR = no requirement; (2) FGI paragraph numbers are shown in parentheses in the “Function of Space” column.

***Normative Notes for Table 7-1:***

m. National Institute for Occupational Safety and Health (NIOSH) criteria documents <sup>11</sup> regarding occupational exposure to waste anesthetic gases and vapors and control of occupational exposure to nitrous oxide indicate a need for both local exhaust (scavenging) systems and general ventilation of the areas in which the respective gases are used. (***Informative Note:*** Refer to NFPA 99 [2021] for other requirements.)

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o. Surgeons or surgical procedures may require room temperatures, ventilation rates, humidity ranges, and/or air distribution methods that exceed the minimum indicated ranges.

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aa. ~~Not used. Patients with undiagnosed gastrointestinal symptoms, undiagnosed respiratory symptoms, or undiagnosed skin symptoms may require increased air changes or exhaust.~~

**Table 8-1 Design Parameters—Specialized Outpatient Spaces**

Function of Space (f)	Pressure Relationship to Adjacent Areas (n)	Minimum Outdoor ach	Minimum Total ach	All Room Air Exhausted Directly to Outdoors (j)	Air Recirculated by Means of Room Units (a)	Minimum Filter Efficiencies (c)	Design Relative Humidity (k), %	Design Temperature (l), °F/°C
...								
DIAGNOSTIC AND TREATMENT ( <i>Continued</i> )								
Examination/observation ( <i>FGI 2.1-3.2.1</i> ) (y)	NR	2	4	NR	NR	MERV-8	Max 60	70–75/21–24
Laboratory work room ( <i>FGI 2.1-4.1.2.1</i> ) (z)	Negative	2	6	Yes	NR	MERV-8	NR	70–75/21–24
Pharmacy/med prep ( <i>FGI 2.1-3.8.8.2 &amp; 2.1-4.2.2</i> ) (b)	Positive	2	4	NR	NR	MERV-8	NR	NR
Laser eye room ( <i>FGI 2.1-3.2.2</i> )	NR	2	6	NR	No	MERV-8	Max 60	68–73/20–23
Nuclear medicine (see Section 8.7) ( <i>FGI 2.1-3.5.7</i> )	Negative	2	6	Yes	No	MERV-8	NR	70–75/21–24
Toilet or Toilet/Shower room ( <i>FGI 2.1-3.10.2</i> )	Negative	NR	10	Yes	No	MERV-8	NR	NR

*Informative Note:* NR = no requirement

**Normative Notes for Table 8-1:**

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y. **Not used. Patients with undiagnosed gastrointestinal symptoms, undiagnosed respiratory symptoms, or undiagnosed skin symptoms may require increased air changes or exhaust.**

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**Table 8-2 Design Parameters—General Outpatient Spaces (q)**

Function of Space (f)	Pressure Relationship to Adjacent Areas (d)	ach Design Option		All Room Air Exhausted Directly to Outdoors (j)	Air Recirculated by Means of Room Units (a)	Min. Filter Efficiencies (c)	Design RH% (i)	Design Temperature °F/°C (k)	$R_p$ - $R_a$ Air-Class Design Option		
		Min. Outdoor ach (q)	Min. Total ach (q)						Air Class (q)	$R_p$ cfm/(L·s)/ person and Min. Space Population (q)	$R_a$ cfm/ft/(L·s/m) (q)
GENERAL DIAGNOSTIC AND TREATMENT											
Birthing room (FGI 2.4-2.2)	NR	2	3	NR (h)	NR	MERV-14	Max 60	70–75/21–24	2	10 (5) / 4	0.18 / (0.9)
Urgent care exam (FGI 2.5-3.2.1) (b), (e)	NR	2	3	NR	NR	MERV-8	NR	70–75/21–24	2	7.5 (3.8) / 3	0.12 / (0.6)
Urgent care treatment (FGI 2.5-3.2.2) (e)	NR	2	3	NR	NR	MERV-8	NR	70–75/21–24	2	7.5 (3.8) / 3	0.18 / (0.9)
Urgent care triage (FGI 2.5-3.2.3)	Negative	2	3	Yes	NR	MERV-8	Max 60	70–75/21–24	3	10 (5) / 3	0.18 / (0.9)
Urgent care observation (FGI 2.5-3.3)	NR	2	2	NR	NR	MERV-8	NR	70–75/21–24	2	5 (2.5) / 2	0.12 / (0.6)
General examination room (FGI 2.1-3.2.1) (b)	NR	2	2	NR	NR	MERV-8	NR	70–75/21–24	1	7.5 (3.8) / 3	0.12 / (0.6)
Laboratory work room (FGI 2.1-4.1.2.1) (l)	NR	2	3	NR (h)	NR	MERV-8	NR	70–75/21–24	2	7.5 (3.8) / 2	0.12 / (0.6)
Medication room (FGI 2.1-3.8.8.2)	NR	2	2	NR	NR	MERV-8	Max 60	70–75/21–24	1	5 (2.5) / 2	0.18 / (0.9)
Class 1 Imaging rooms (FGI 2.1-3.5) (g)	NR	2	3	NR	NR	MERV-8	Max 60	72–78/22–26	1	7.5 (3.8) / 2	0.12 / (0.6)
Psychiatric examination room (FGI 2.11-3.2.2)	NR	2	3	NR	NR	MERV-8	NR	70–75/21–24	1	5 (2.5) / 2	0.06 / (0.3)
Psychiatric consultation room (FGI 2.11-3.2.4)	NR	2	3	NR	NR	MERV-8	NR	70–75/21–24	1	5 (2.5) / 2	0.06 / (0.3)
Psychiatric group room (FGI 2.11-3.2.5)	NR	2	3	NR	NR	MERV-8	NR	70–75/21–24	1	5 (2.5) / 2	0.06 / (0.3)
Psychiatric seclusion room (FGI 2.11-3.2.7)	NR	2	2	NR	NR	MERV-8	NR	70–75/21–24	2	10 (5) / 3	0.12 / (0.6)
ECT procedure room (FGI 2.11-3.2.9.2)	NR	2	2	NR	NR	MERV-8	NR	70–75/21–24	1	7.5 (3.8) / 3	0.12 / (0.6)
Physical therapy individual room (FGI 2.12-3.2.2.1)	NR	2	3	NR (h)	NR	MERV-8	NR	70–75/21–24	2	10 (5) / 3	0.12 / (0.6)
Physical therapy exercise area (FGI 2.12-3.2.3)	NR	2	3	NR (h)	NR	MERV-8	NR	70–75/21–24	2	20 (10) / 2	0.18 / (0.9)
Hydrotherapy (FGI 2.12-3.2.4)	Negative	2	3	Yes	NR	MERV-8	NR	72–80/22–27	3	20 (10) / 2	0.12 / (0.6)
Physical therapeutic pool (FGI 2.12-3.2.4)	Negative	2	10	Yes	NR	MERV-8	NR	72–80/22–27	3	—	0.48 / (2.4)
Speech therapy room (FGI 2.12-3.3.2)	NR	2	2	NR	NR	MERV-8	NR	70–75/21–24	1	5 (2.5) / 2	0.06 / (0.3)
Occupational therapy (FGI 2.12-3.3)	NR	2	3	NR	NR	MERV-8	NR	70–75/21–24	1	5 (2.5) / 2	0.06 / (0.3)
Prosthetics and orthotics room (FGI 2.12-3.3.1)	NR	2	3	NR	NR	MERV-8	NR	70–75/21–24	2	10 (5) / 3	0.18 / (0.9)
Dental treatment (FGI 2.14-3.1.1)	NR	2	3	NR	NR	MERV-8	NR	70–75/21–24	1	10 (5) / 3	0.18 / (0.9)
Other dental treatment areas (FGI 2.14-3.2)	NR	2	3	NR	NR	MERV-8	NR	70–75/21–24	1	5 (2.5) / 2	0.06 / (0.3)
Toilet room (FGI 2.1-3.10.2)	Negative	NR	4	Yes	No	MERV-8	NR	NR	3	—	—

***Normative Notes for Table 8-2:***

- a. Except where indicated by a “No” in this column, recirculating room HVAC units (with heating or cooling coils) are acceptable for providing that portion of the minimum total air changes per hour that is permitted by Section 8.2(a)(5). Because of the cleaning difficulty and potential for buildup of contamination, recirculating room units shall not be used in areas marked “No.”
- b. ~~Not used.~~ Patients with undiagnosed gastrointestinal symptoms, undiagnosed respiratory symptoms, or undiagnosed skin symptoms may require increased air changes or exhaust.
- c. Table entries are the minimum filter efficiencies required for the space. Refer to Section 6.4 of this document for further clarification of filtration requirements. The minimum efficiency reporting value (MERV) is based on the method of testing described in ASHRAE Standard 52.2 (***Informative Note:*** ASHRAE [2012] in Informative Appendix E).

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