

Pressurization & Airborne Contaminants – Healthcare Construction & Renovation

Renovation in or around occupied healthcare facilities can pose significant risks to patients, and significant liabilities to healthcare owners and contractors. Specifically, airborne contaminants generated by construction activities can increase patient healthcare risks and higher rates of morbidity have been observed in healthcare settings undergoing renovation. This survey was developed to investigate the activities, conditions, requirements, and training for construction activities in or near occupied healthcare facilities. Your participation in this 10-12 minute survey will help ascertain current practice and enhance understanding of the steps industry professionals are taking to minimize the risk of airborne transmission of pathogens during construction. Please know that all responses will be kept confidential. **Thank you for your participation.**

General Information:

- 1) Type of Organization: (Please check the one category that most closely represents your firm/organization)

Contractor or CM	Healthcare Owner	Designer/ Engineer	CDC	Other
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
- 2) Location of your corporate offices: _____ (State)
- 3) Which of the following geographical designations best describes your organization's area of operation?

<input type="checkbox"/> Global	<input type="checkbox"/> National	<input type="checkbox"/> Regional	<input type="checkbox"/> Statewide	<input type="checkbox"/> Local
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- 4) Approximate annual total construction volume: _____ million _____ Don't Know
- 5) Approximate annual healthcare construction volume: _____ million _____ Don't Know
- 6) Approximate length of time your firm has been in healthcare construction? _____ yrs
- 7) Approximate number of years of healthcare experience you personally have? _____ yrs
- 8) What is your current position (title)? _____

Pressurization of the Construction Work Area for Healthcare Additions/Renovations

- 9) Typically, how important are the following variables in establishing pressurization strategy for a project?
(1=none, 2= minimal, 3= somewhat, 4= important, 5= very important, 6 = do not know)

	None	Some	Significant	DNK
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• Project Size	1	2	3	4	5	6
• Sensitivity (risk/control class)	1	2	3	4	5	6
• Contractor Requirements/Standards	1	2	3	4	5	6
• Owner Requirements/Standards	1	2	3	4	5	6
• Cost	1	2	3	4	5	6
• CDC Requirements/Standards	1	2	3	4	5	6
• Other Regulatory Requirement/Standards*	1	2	3	4	5	6

* Please identify any other 'regulatory requirements/standards' you think are of importance: _____

- 10) What level of pressurization of the construction workspace do you normally utilize? _____

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11) Who typically has the primary role in establishing pressurization levels?

Contractor ☐ Healthcare Owner ☐ Designer/Engineer ☐ CDC Standards ☐ Other _____

12) a) How often do pressurization levels differ from project to project?

☐ Never ☐ Rarely ☐ Sometimes ☐ Often ☐ Very Frequently

b) If pressurization levels vary – what is the range? _____

13) What impact, if any, do (or you think should) the following variables have on negative pressure requirements for the construction area? (select one)

(1=none, 2= minimal, 3= some, 4= substantial, 5= very significant, 6 = do not know (DNK))

• Risk/Sensitivity of the project (Class???)	1	2	3	4	5	6
• Healthcare owner requirements	1	2	3	4	5	6
• Budget constraints	1	2	3	4	5	6
• The type of construction for the workspace barrier	1	2	3	4	5	6
• Project size	1	2	3	4	5	6
• Leakiness of the space	1	2	3	4	5	6

14) How often are the CDC guidelines for negative pressure (-0.01 in. w.g.) exceeded on your projects (greater negative pressure)?

☐ Never ☐ Rarely ☐ Sometimes ☐ Often ☐ Frequently

15) How often are the CDC guidelines for negative pressure (-0.01 in. w.g.) reduced on your projects (less negative pressure)?

☐ Never ☐ Rarely ☐ Sometimes ☐ Often ☐ Frequently

16) How often do your project requirements for negative pressure match the CDC guidelines (-0.01 in. w.g.)?

☐ Never ☐ Rarely ☐ Sometimes ☐ Often ☐ Frequently

17) Have you, or your firm, ever investigated the impact of using different pressurization levels? Yes No

18) If you answered Yes to question 17, what were your findings? _____

19) If you answered No to question 18, what impact did the following have on your decision to not investigate using different pressurization levels?

(1=none, 2= minimal, 3= some, 4= meaningful, 5= significant, 6 = do not know (DNK))

• Cost to investigate	1	2	3	4	5	6
• Liability for contamination during the investigation period	1	2	3	4	5	6
• Inability to conduct a rigorous and reliable test	1	2	3	4	5	6
• Owners not interested in establishing requirements different from current industry standards	1	2	3	4	5	6
• Contractors not interested in establishing requirements different from current industry standards	1	2	3	4	5	6

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Monitoring of Pressurization

20) How often do the following parties independently monitor pressurization on the construction site?

Item	Never	Seldom	Sometimes	Often	Always
• Owner Personnel	1	2	3	4	5
• General Contractor (CM)	1	2	3	4	5
• Specialty Contractors (Subcontractors)	1	2	3	4	5
• 3 rd Party Testing Service	1	2	3	4	5

21) How often is the monitoring system connected to the hospital control (alarm) system?

☐ Never ☐ Rarely ☐ Sometimes ☐ Often ☐ Always

22) How often does the monitoring system utilize a backup exhaust system?

☐ Never ☐ Rarely ☐ Sometimes ☐ Often ☐ Always

23) How often is monitoring 24 hours/day, 7 days a week?

☐ Never ☐ Rarely ☐ Sometimes ☐ Often ☐ Always

24) How frequently are the following parties advised of any significant pressure drop?

	Never	Seldom	Sometimes	Often	Always
• General Contractor (CM)	1	2	3	4	5
• Owner Personnel	1	2	3	4	5
• Specialty Contractor	1	2	3	4	5

25) What is the expected response time to a pressure drop? _____

Training for Containment of Airborne Contaminants during Construction

26) How often do healthcare owners require the contractor's personnel to obtain training?

☐ Never ☐ Rarely ☐ Sometimes ☐ Often ☐ Always

27) Who is required to obtain training?

<input type="checkbox"/>	project mgmt.	<input type="checkbox"/>	project supervision	<input type="checkbox"/>	GC craft supervisors	<input type="checkbox"/>	contractor workers	<input type="checkbox"/>	subcontractor supervisors	<input type="checkbox"/>	subcontractor workers	<input type="checkbox"/>	No one is required
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28) How often is training typically required?

☐ start of each project ☐ every 12 months ☐ every 6 months

29) How often are the following entities responsible to actually conduct (provide) the training?

Item	Never	Seldom	Sometimes	Often	Always
• Owner Personnel	1	2	3	4	5
• General Contractor (CM)	1	2	3	4	5
• Architect/Engineer	1	2	3	4	5
• 3 rd Party Trainer(s)	1	2	3	4	5

30) Does the level (amount) of training vary based upon risk classification of the construction?

☐ Never ☐ Rarely ☐ Sometimes ☐ Often ☐ Always

31) Does the frequency of training vary based upon risk classification of the construction?

☐ Never ☐ Rarely ☐ Sometimes ☐ Often ☐ Always

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Pressurization System Design

- 32) How often does the pressurization system use direct exhaust from the construction zone/space?
☐ Never ☐ Rarely ☐ Sometimes ☐ Often ☐ Always
- 33) How often does the pressurization system exhaust using the existing HVAC/duct system?
☐ Never ☐ Rarely ☐ Sometimes ☐ Often ☐ Always
- 34) How often are anterooms incorporated into the pressurization system?
☐ Never ☐ Rarely ☐ Sometimes ☐ Often ☐ Always
- 35) To what extent, if any, does risk level (class) influence the use of anterooms?
☐ no impact ☐ little impact ☐ some impact ☐ substantial ☐ very significant

- 36) Would you be willing to be interviewed to provide additional insight on these topics? Yes No

If Yes, please provide your contact information:

Name: _____ Company: _____

Address: _____

Phone: _____ e-mail: _____

- 37) If you would like a summary of the findings of this study please provide your e-mail address:

Your e-mail address: _____

- 38) Any additional comments? _____

Thank you for your participation!