

NIST - Ambulance Design Standards 2011 Customer Satisfaction Questionnaire Final

Introduction

The U.S. Department of Homeland Security Science and Technology Directorate Human Factors and Behavioral Sciences Division is teaming with the National Institute of Standards and Technology (NIST), the National Institute for Occupational Safety and Health (NIOSH) and BMT Designers and Planners to aid in the development of standards for the design of patient compartments in ambulances. In conjunction with that goal, this survey is also measuring satisfaction with current design standards.

This survey is being administered by CFI Group. All information you provide will be combined with information from other respondents for research and reporting purposes. Your individual responses will not be released. This survey will take about 15 minutes of your time.

If you have any questions about this survey, please contact (CONTACT EMAIL).

This survey is authorized by the U.S. Office of Management and Budget Control No. 1090-0007.

Work-related Information

Please tell us a bit about your work background. The following questions will be used for categorizing your responses only:

1. What is your affiliation with ambulance service?
 1. EMS Provider – Volunteer
 2. EMS Provider – Career
 3. Trainer
 4. Other (Please specify)

2. What is your average transit time with a patient to a hospital?
 1. 5 minutes or less
 2. Between 6 – 10 minutes
 3. Between 11 – 15 minutes
 4. Between 16 – 20 minutes
 5. Between 21 and 30 minutes
 6. More than 30 minutes

3. What type of ambulance do you usually work in?
 1. Box (Type I and III)
 2. Van (Type II)
 3. Other (Please specify)

4. What type of service does your ambulance typically perform? (Select all that apply.)
 1. Transport
 2. 911
 3. BLS
 4. ALS

Work Environment

Please tell us about your preferences for ambulance seating.

5. What type of seat do you currently use?
 1. Bench
 2. Bucket
 3. Other (Please specify)

6. What seating orientation do you prefer in the patient compartment?
 1. Side-facing
 2. Rearward-facing
 3. Forward-facing
 4. No preference

7. Do you recommend a CPR seat in the patient compartment?
 1. Yes
 2. No
 3. No preference

Please indicate the extent to which you agree or disagree with the following statements. Use a scale from "1" to "10", where "1" is "strongly disagree" and "10" is "strongly agree."

8. The location and height of the seats provide me with sufficient reach to the patient.

9. The location and height of the seats provide me with sufficient reach to equipment and supplies.

10. Thinking about the type of ambulance you typically work in, please rate the seating in the patient compartment in terms of allowing you to do your job. Use a 10-point scale, where "1" means "poor" and "10" means "excellent."

- 10a. Please provide any comments you have on ambulance seating.

Occupancy

The following questions ask about your experiences with ambulance occupancy and patient transport.

11. What percent of the time do you transport more than one patient?
 1. Never
 2. Less than 10%
 3. Between 10% – 25%
 4. Between 26% – 50 %
 5. More than 50%

12. How many patients do you have the capability to safely transport?
 1. 2
 2. 3
 3. 4
 4. 5
 5. More than 5

13. Thinking about the type of ambulance you typically work in, please rate the how the level of ambulance occupancy and patient transport features allow you to do your job. Use a 10-point scale, where "1" means "poor" and "10" means "excellent."

- 13a. Please provide any comments you have on ambulance occupancy and/or patient transport.

Ergonomics

Please indicate the extent to which you agree or disagree with the following statement. Use a scale from "1" to "10", where "1" is "strongly disagree" and "10" is "strongly agree."

14. There is enough room and general mobility around the ambulance patient compartment when taking care of the patient.
15. Please indicate if there are any controls, such as lighting, radio and ventilation, that you cannot reach from your seat as you provide patient care? (Select all that apply.)
 1. Lighting
 2. Radio
 3. Ventilation
 4. Other(s) (Please specify)
 5. Not a problem. I can reach all needed controls
16. Please indicate if you have concerns about any of the following as they relate to the gurney/stretchers. (Select all that apply.)
 1. Location of the gurney/stretchers
 2. Orientation of the gurney/stretchers
 3. Security of the gurney/stretchers
 4. I have no concern about the gurney/stretchers

(IF 16=1, 2 or 3 ASK Q17)

17. What are your concerns? Please describe.
18. Thinking about the type of ambulance you typically work in, please rate the ergonomic features of its patient compartment on a 10-point scale, where "1" is "poor" and "10" is "excellent."
- 18a. Please provide any comments you have on the ergonomic features of ambulances.

Restraint Systems

19. What kind of safety restraints are currently in your patient compartment? (Select all that apply.)
 1. Lap belt
 2. Lap and shoulder belt
 3. 4-point
 4. 5-point
 5. 7-point
 6. Other (Please specify)
20. Think about the times when you are in the patient compartment and NOT treating the patient. What percentage of the time do you wear the restraint system in the patient compartment when NOT treating the patient?
 1. Less than 15%
 2. Between 15% – 40%
 3. Between 41% – 65%
 4. Between 66% – 90%
 5. More than 90%
21. Think about the times when you are in the patient compartment treating the patient. What percentage of the time do you wear the restraint system in the patient compartment when treating the patient?
 1. Less than 15%
 2. Between 15% – 40%
 3. Between 41% – 65%
 4. Between 66% – 90%
 5. More than 90%

(IF Q20 or Q21 =1, 2, 3 or 4 ASK Q22)

22. What is the main reason for not wearing restraints? (Please describe.)

Please indicate the extent to which you agree or disagree with the following statement. Use a scale from "1" to "10", where "1" is "strongly disagree" and "10" is "strongly agree."

23. Moving within the ambulance while unrestrained and caring for the patient is an inherent risk of EMS work.

24. Please indicate if you have any of the following regulations for seat belt usage. (Select all that apply.)

1. District
2. County
3. State
4. Organization
5. Other (Please specify)
6. Don't know

25. Thinking about the type of ambulance you typically work in, please rate how well its safety restraint features allow you to do your job. Use a 10-point scale, where "1" means "poor" and "10" means "excellent."

25a. Please provide any comments you have on the restraint systems in ambulances.

Communications

26. Is your ambulance equipped with a computer system?

1. Yes
2. No
3. Don't know

(IF Q26=1 ASK Q27)

27. What is your computer system's primary use?

28. If you could be given information regarding what the driver is going to do next (e.g., stop, turn, change in speed), how would you want to receive it? (Select all that apply.)

1. Verbally/yelling
2. Radio
3. Visual display
4. Notification lights
5. Other (Please specify)
6. Would not want to receive that information

29. What is the most effective form of communication between the driver and patient compartment? (Please describe.)

30. Thinking about the type of ambulance you typically work in, please rate its communication system in terms of allowing you to do your job. Use a 10-point scale, where "1" means "poor" and "10" means "excellent."

30a. Please provide any comments you have on communication systems in ambulances.

Performance

The following tables list some of equipment/supplies provided in the ambulance patient compartment. Please indicate how easy it is to reach the item (equipment or supply), and the frequency of using the item.

31. Ventilation/respiration equipment	Difficulty of reach from the seated position: (Reach without strain; Reach with strain; Unable to reach without leaving seat; N/A)	Frequency of use: (100%; <100% to >75%; <75% to >50%; <50% to >25%; <25% to >0%; (0%))
a) Portable oxygen		
b) Stationary oxygen		
c) Resuscitator with oxygen inlet and masks		
d) Mouth-to-mask ventilator with oxygen inlet		
e) Non-manual suction device		
f) Portable suction device		
g) Other (Please specify)		

32. Diagnostics Equipment	Difficulty of reach from the seated position: (Reach without strain; Reach with strain; Unable to reach without leaving seat; N/A)	Frequency of use: (100%; <100% to >75%; <75% to >50%; <50% to >25%; <25% to >0%; (0%))
a) Oximeter		
b) Stethoscope		
c) Thermometer		
d) Blood glucose meter		
e) Diagnostic light		
f) Blood pressure monitor		
g) Other		

33. Infusion material or equipment (e.g., intravenous therapy)	Difficulty of reach from the seated position: (Reach without strain; Reach with strain; Unable to reach without leaving seat; N/A)	Frequency of use: (100%; <100% to >75%; <75% to >50%; <50% to >25%; <25% to >0%; (0%))
a) Infusion solutions		
b) Equipment for injections and infusions		
c) Infusion system for administration of warm fluid		
d) Infusion mounting		
e) Pressure infusion device		
f) Other		

34. Equipment for managing of life-threatening situations	Difficulty of reach from the seated position: (Reach without strain; Reach with strain; Unable to reach without leaving seat; N/A)	Frequency of use: (100%; <100% to >75%; <75% to >50%; <50% to >25%; <25% to >0%; (0%))
a) Defibrillator with rhythm and patient data recording		
b) Cardiac monitor		
c) External cardiac pacing		
d) Portable Resuscitation System		
e) Nebulization apparatus		
f) Thorax drainage kit		
g) Volumetric infusing device		
h) Central vein catheters		
i) PEEP-valve		
j) Capnometer		
k) Other		

35. Supplies/Bandaging/Nursing/PPE	Difficulty of reach from the seated position: (Reach without strain; Reach with strain; Unable to reach without leaving seat; N/A)	Frequency of use: (100%; <100% to >75%; <75% to >50%; <50% to >25%; <25% to >0%; (0%))
a) Blankets		
b) Material for treatment of wounds		
c) Material for treatment of burns and corrosives		
d) Kidney bowl		
e) Vomiting bag		
f) Bed-pan		
g) Non-glass urine bottle		
h) Sharps container		
i) Sterile surgical gloves, pairs		
j) Non-sterile gloves for single use		
k) Hazmat suits		
l) Other		

36. Medicine Storage	Difficulty of reach from the seated position: (Reach without strain; Reach with strain; Unable to reach without leaving seat; N/A)	Frequency of use: (100%; <100% to >75%; <75% to >50%; <50% to >25%; <25% to >0%; (0%)
Jump bag		
Locked narcotics		
Other		

37. Communications	Difficulty of reach from the seated position: (Easy; Reach with strain; Can't reach without leaving seat; N/A)	Frequency of use: ((100%; <100% to >75%; <75% to >50%; <50% to >25%; <25% to >0%; (0%)
Mobile radio transceiver		
Portable radio transceiver		
Intercom		
Cell phone		
Other		

ACSI

Think about how satisfied you are with the current design standards in ambulances in terms of safety and allowing you to do your job.

38. On a scale from 1 to 10 where “1” means *Very Dissatisfied* and “10” means *Very Satisfied*, how satisfied are you with the current standards of design in ambulances.
39. Using a 10-point scale on which “1” now means *Does Not Meet Expectations* and “10” means *Exceeds Expectations*, to what extent do the design standards meet your expectations.
40. Forget for a moment your experiences with ambulances and current design standards. Now imagine the ideal design standards for ambulances. How well do you think the current design standards compare with that ideal? Please use a scale from “1” to “10”, where “1” means “very far from ideal” and “10” means “very close to ideal.”