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Citation: Carolus, Glenhael, Kumar Singh, Kanhaiya, Hamzaoui, Mourad, Abid, Jalal Younes, Mohamed Nazar, Khalid, Carolus, Dillan, Singh, Rajvir and Alinier, Guillaume (2022) Qatar Ambulance Service staff's perception on the Quality-of-Service delivery to patients. *Journal of Emergency Medicine, Trauma and Acute Care*, 2022 (1). ISSN 1999-7086

Published by: Hamad bin Khalifa University Press

URL: <https://doi.org/10.5339/jemtac.2022.qhc.54>  
<<https://doi.org/10.5339/jemtac.2022.qhc.54>>

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## Qatar Ambulance Service staff's perception on the Quality-of-Service delivery to patients

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### ABSTRACT

**Background:** Quality improvement has been well documented in various industries to improve safety and processes.<sup>1</sup> However, limited research has taken place within the pre-hospital sector in this regard. Various factors can be attributed to the delivery of effective services. Studies often investigate customer/patient perception and often sideline the importance of employee perception.<sup>2</sup> This study evaluates Qatar's Hamad Medical Corporation Ambulance Service (HMCAS) staffs' perception on service delivery to patients they treat and transport.

**Methods:** An online survey was designed and distributed to HMCAS staff working within the emergency section (N = 750). A 5-point Likert scale (1 = strongly disagree to 5 = strongly agree) was used. The SERVQUAL model consisting of 5 dimensions (RATER): Reliability, Assurance, Tangibility, Empathy, and Responsiveness was used.<sup>3</sup> Two variables with the highest perception score were regarded as the drivers of service quality. A negative gap score (perception minus expectation) was used as the basis for the study recommendations.

**Results:** As per the required calculated sample size to achieve a 95% confidence interval, 255 questionnaires were completed. Respondents were 79% Ambulance Paramedics, 18% supervisors, and 3% managers. The weights of each dimension's variables were calculated to obtain perception and expectation scores. Descriptive statistics and gap scores of the survey responses are presented in [Table 1](#) for the two variables of each dimension. None of the gap scores were found to be statistically significant. The proposed recommendations generated from this study are presented in [Table 2](#).

**Conclusion:** A standardized staff quality perception tool can assist in identifying potentially missed quality-related service issue(s). In this study, the SERVQUAL model was easily adapted and applied to the pre-hospital Emergency Medical Service setting in Qatar and proved useful in identifying service delivery proponents needing attention. Overall and reassuringly, the staff believes that they provide quality service to their patients.

**Keywords:** Quality, Service provision, Emergency Medical Service, Customer service, Staff Perception

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<http://dx.doi.org/10.5339/jemtac.2022.qhc.54>

Submitted: 27 July 2021

Accepted: 6 September 2021

Publication date: 15 January 2022

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**Table 1.** SERVQUAL results and gap score.

SERVQUAL Dimension	Statement	Frequency (n=255)	Responses in agreement (%) (Scored 4 or 5 on Likert scale)	Perception (P)	Expectation (E)	Gap Score (P - E)
				(1=strongly disagree to 5=strongly agree)		
Reliability	Provide service within timeframes	230	86	4.26	4.09	0.17
Reliability	Service reliability	219	90	4.17	4.27	-0.1
Assurance	Accurate records	209	82	4.16	4.31	-0.15
Assurance	Adequate support from HMCAS	191	75	3.89	4.33	-0.44
Tangibles	Up-to-date equipment	240	94	4.39	4.44	-0.05
Tangibles	Visually appealing ambulances	227	89	4.3	4.22	0.08
Empathy	Provide individual patient attention	222	87	4.21	4.32	-0.11
Empathy	Understand patient needs	227	89	4.27	4.29	-0.02
Responsiveness	Inform patients on clinical procedures	227	89	4.2	4.38	-0.18
Responsiveness	Provide prompt service	230	90	4.31	4.37	-0.06

**Table 2.** Proposed recommendations based on the survey results.

- Further investigate the suitability of the SERVQUAL model for HMCAS.
- Documentation intervention must be devised to improve record keeping.
- Strengthen current staff support programmes and establish what support measures staff requires.
- Ensure equipment is current, maintained, and issues or areas of deficiencies are addressed promptly.
- Understand the factors impacting the provision of individual patient attention.
- Perform a patient needs analysis.
- Initiatives that revisit and emphasise health care ethics and professional conduct.
- Establish factors that impact prompt service delivery and possible mitigation measures.

**Ethical approval:** This study was approved by the Hamad Medical Corporation Medical Research Center (Ref: 171799/17).

**Acknowledgments:** The authors are appreciative of the time taken by the participants to complete this survey so that we can improve the services provided by HMCAS.

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