Factors affecting the technical efficiency of general hospitals in Iran: data envelopment analysis
Rohollah Kalhor\textsuperscript{a}, Saeed Amin\textsuperscript{b}, Mobin Sokhanvar\textsuperscript{c}, Farhad Lotfi\textsuperscript{d}, Marziye Sharifi\textsuperscript{e} and Edris Kakemam\textsuperscript{e}

\textsuperscript{a}Social Determinants of Health Research Center, Qazvin University of Medical Sciences, Qazvin, \textsuperscript{b}Research Center for Health Services Management, Institute for Future Studies in Health, Kerman University of Medical Sciences, Kerman, \textsuperscript{c}Student Research Committee, Tabriz University of Medical Science, Tabriz, \textsuperscript{d}Health Human Resources Research Center, School of Management & Information Sciences, Shiraz University of Medical Sciences, Shiraz and \textsuperscript{e}Department of Health Management and Economics, School of Public Health, Tehran University of Medical Sciences, Tehran, Iran

Correspondence to Edris Kakemam, MSc, Iranian Center of Excellence in Health Management, School of Management and Medical Informatics, Tabriz University of Medical Sciences, 5166614711 Tabriz, Iran
Tel: + 98 936 639 0668; fax: + 98 441 333 51048; e-mail: edris_kakemam@yahoo.com

Received 28 September 2015
Accepted 21 December 2015
Journal of the Egyptian Public Health Association 2016, 91:20–25

Background
Restrictions on resource accessibility and its optimal application is the main challenge in organizations nowadays. The aim of this research was to study the technical efficiency and its related factors in Tehran general hospitals.

Materials and methods
This descriptive analytical study was conducted retrospectively in 2014. Fifty-four hospitals with private, university, and social security ownerships from the total 110 general hospitals were randomly selected for inclusion into this study on the basis of the share of ownership. Data were collected using a checklist with three sections, including background variables, inputs, and outputs.

Results
Seventeen (31.48\%) hospitals had an efficiency score of 1 (highest efficiency score). The highest average efficiency score was in social security hospitals (84.32). Private and university hospitals ranked next with an average of 84.29 and 79.64, respectively. Analytical results showed that there was a significant relationship between hospital ownership, hospital type in terms of duty and specialization, educational field of the chief executive officer, and technical efficiency. There was no significant relationship between education level of hospital manager and technical efficiency.

Conclusion and recommendations
Most of the studied hospitals were operating at low efficiency. Therefore, policymakers should plan to improve the hospital operations and promote hospitals to an optimal level of efficiency.

Keywords:
data envelopment analysis, general hospital, Iran, ownership, technical efficiency